

Service Manual

Dolby NR-Equipped
Stereo Cassette Deck

Cassette Deck
RS-B355



Color

(S)...Silver Type
(K)...Black Type



Area

Color	Area
(S) (K)	(E) Continental Europe.
(S) (K)	(EK).....United Kingdom.
(S) (K)	(EG).....F.R. Germany.
(S) (K)	(EH).....Holland.
(S) (K)	(XA).....Asia, Latin America, Middle Near East, Africa and Oceania.
(S) (K)	(XL) Australia.
(S) (K)	(XB).....Saudi Arabia.

SPECIFICATIONS

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
REC/PLAY	Solid Permalloy head
Erasing	Double-gap ferrite head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec. (1-7/8 ips)
Frequency response	
METAL	20 Hz~18 kHz
	30 Hz~17 kHz (DIN)
CrO₂	20 Hz~17 kHz
	30 Hz~16 kHz (DIN)
NORMAL	20 Hz~16 kHz
	30 Hz~15 kHz (DIN)
S/N (signal level=max recording level, CrO ₂ type tape)	
Dolby C NR on	74 dB (CCIR)
Dolby B NR on	66 dB (CCIR)
NR off	56 dB (A weighted)
Wow and flutter	0.08% (WRMS)
	±0.2% (DIN)
Fast Forward and Rewind Time	
	Approx. 100 seconds with C-60 cassette tape

Input sensitivity and impedance

MIC	0.25 mV/400Ω~10 kΩ
LINE	60 mV/47 kΩ

Output voltage and impedance

LINE	400 mV/3 kΩ
HEADPHONES	30 mV/8Ω

■ GENERAL

Power consumption	15 W
Power supply	

For United Kingdom and Australia

AC 50 Hz/60 Hz, 240 V

For continental Europe AC 50 Hz/60 Hz, 220 V

For others AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V

Dimensions (W × H × D) 430 × 114.5 × 287 mm
(16-15/16" × 4-1/2" × 11-5/16")

Weight 4.3 kg (9.5 lb.)

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

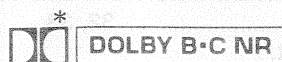
Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Service Manual

Dolby NR-Equipped
Stereo Cassette Deck

Cassette Deck
RS-B355



Color

(S)...Silver Type
(K)...Black Type



Area

Color	Area
(S) (K)	(E).....Continental Europe.
(S) (K)	(EK).....United Kingdom.
(S) (K)	(EG).....F.R. Germany.
(S) (K)	(EH).....Holland.
(S) (K)	(XA).....Asia, Latin America, Middle Near East, Africa and Oceania.
(S) (K)	(XL).....Australia.
(S) (K)	(XB).....Saudi Arabia.

SPECIFICATIONS

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
REC/PLAY	Solid Permalloy head
Erasing	Double-gap ferrite head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80kHz
Erasing system	AC erase
Tape speed	4.8cm/sec. (1-7/8ips)
Frequency response	
METAL	20Hz~18kHz
	30Hz~17kHz (DIN)
CrO ₂	20Hz~17kHz
	30Hz~16kHz (DIN)
	20Hz~16kHz
	30Hz~15kHz (DIN)
S/N (signal level = max recording level, CrO ₂ type tape)	
Dolby C NR on	74dB (CCIR)
Dolby B NR on	66dB (CCIR)
NR off	56dB (A weighted)
Wow and flutter	0.08% (WRMS)
	±0.2% (DIN)
Fast Forward and Rewind Time	
	Approx. 100 seconds with C-60 cassette tape

Input sensitivity and impedance

MIC	0.25mV/400Ω~10kΩ
LINE	60mV/47kΩ

Output voltage and impedance

LINE	400mV/3kΩ
HEADPHONES	30mV/8Ω

GENERAL

Power consumption	15W
Power supply	

For United Kingdom and Australia

AC 50Hz/60Hz, 240V

For continental Europe

AC 50Hz/60Hz, 220V

For others AC 50Hz/60Hz, 110V/127V/220V/240V

Dimensions (W × H × D)

430 × 114.5 × 287mm
(16-15/16" × 4-1/2" × 11-5/16")

Weight

4.3kg (9.5lb.)

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Industrial Co., Ltd.

Central P.O. Box 288, Osaka 530-91, Japan

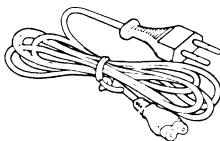
CONTENTS

	Page		Page
• Accessories.....	2	• Block Diagram	19, 20
• How to Connection	2	• Schematic Diagram	21~25
• Location of Controls.....	3	• Resistors & Capacitors	26~28
• Disassembly Instructions.....	4, 5	• Terminal Guide of IC's, Transistors and Diodes	28
• Measurement and Adjustment Methodes	5~7	• Mechanical Parts Location	29, 30
• Microcomputer Terminal Function.....	8~11	• Replacement Parts List (Mechanical Parts)	31
• Wiring Connection Diagram.....	12	• Cabinet Parts Location.....	32, 33
• Printed Circuit Boards.....	13~16	• Replacement Parts List (Cabinet, Packings and Accessories Parts).....	34
• Replacement Parts List (Electrical Parts).....	17, 18		

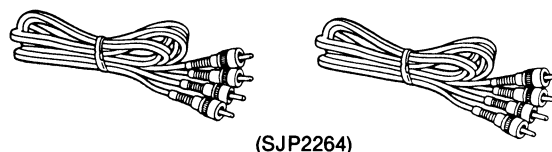
ACCESSORIES

- AC power supply cord 1

SJA171	(E, EH, EG)
SFDAC05G02	(EK)
SJA173	(XL)
SJA168-1	(XA)
SJA183	(XB)

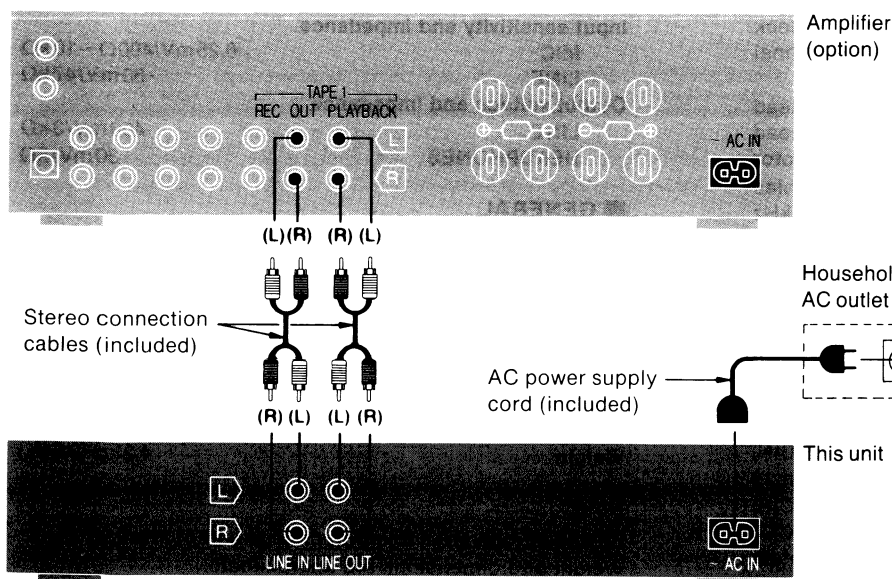


- Stereo connection cables..... 2



Note: Configuration of AC power supply cord differs according to area.

HOW TO CONNECTION



Placement Hints

If this unit is placed near a Amplifier or tuner, a "hum" noise may be heard during tape playback, recording, or AM reception of the tuner. If this occurs, leave as much space as possible between the units, or place them where there is the least amount of "hum".

Note:
The configuration of the AC outlet and AC power supply cord differs according to area.

For United Kingdom

Household AC outlet

AC power supply cord (included)

Fit a suitable plug to the AC power supply cord.

Cassette Deck

RS-B355

DEUTSCH

MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator

- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Tonkopf-Azimuteinstellung

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für die Azimuteinstellung (8kHz, -20dB) ab. Drehen Sie die Azimuteinstellschraube so lange, bis die Abgaben des L-K und R-K den Höchstwert erreichen, und die Lissajossche wellenfigur sich, wie abgebildet, 0 Grad nähert.

Anmerkung:

When L-K und R-K nicht auf demselben Punkt ihren Höchstwert erreichen, stellen Sie beide Kanäle auf den jeweiligen Höchstwert und gleichen dann aus.

2. Nehmen Sie denselben Einstellvorgang in der Wiedergabestellung vor.
3. Nach der Einstellung Schrauben-Sicherungsmittel an die Azimuth-Einstellschraube geben.

Einstellung der Gesamtverstärkungsregelung

1. Legen Sie das normale Leertestband (QZZCRA) ein und stellen das Gerät auf Aufnahme-/Betrieb.
2. Legen Sie ein Bezugseingabesignal (1kHz, -24dB) an. Stellen Sie das Ausgangssignal auf einen Pegel von 0.4V ein.
3. Nehmen Sie das Eingabesignal auf.
4. Geben Sie das in Schritt 3 oben aufgenommene Signal wieder und achten Sie darauf, daß das Ausgangssignal mit dem Normwert übereinstimmt.
5. Sollte der Wert nicht innerhalb der Norm liegen, justieren Sie **VR7** (L-K) und **VR8** (R-K).
6. Wiederholen Sie die Schritte 2~5 von oben so lange, bis das Ausgangssignal im Normbereich liegt.

Bandgeschwindigkeitseinstellung

1. Spielen Sie den Mittelteil des Testbands (QZZCWAT) ab.
2. Stellen Sie den **VR** im Motor so ein, daß die Abgabe den Normwert erfüllt.

Einstellung der Wiedergabeverstärkungsregelung

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für die Einstellung der Verstärkungsregelung (315Hz, 0dB) ab.
2. Stellen Sie **VR5** (L-K) und **VR6** (R-K) so ein, daß die Abgabe den Normwert erfüllt.

Wiedergabefrequenzaang

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für den Frequenzgang (315Hz, 12.5kHz~63Hz, -20dB) ab.
2. Achten Sie darauf, daß der Frequenzgang für beide Kanäle (L-K, R-K) in dem in **Abb. 6** gezeigten Bereich liegt.

Gesamtfrequenzgang

1. Legen Sie das normale Leertestband (QZZCRA) ein und stellen das Gerät auf Aufnahme-/Pause-Betrieb.
2. Geben Sie über einen Lautstärkeregler ein Bezugseingabesignal (1kHz, -24dB) ein.
3. Stellen Sie das Signal auf 20dB und justieren die Frequenz von 50Hz~10.0kHz.
4. Nehmen Sie das Wobbelsignal auf.
5. Geben Sie das aufgenommene Signal wieder und achten darauf, daß dieses sich im Vergleich zur Bezugsfrequenz (1kHz) in dem in **Abb. 8** aufgezeichneten Bereich befindet.
6. Sollte das Signal nicht im Normbereich liegen, justieren Sie **VR301** (L-K) und **VR302** (R-K) so, daß der Frequenzpegel mit der Norm übereinstimmt.
7. Wiederholen Sie die Schritte 2~6 und verwenden das CrO₂ Band (QZZCRX) und das Metallband (QZZCRZ). Der Frequenzbereich wird auf 12.5kHz (50Hz~12.5kHz) angehoben.
8. Achten Sie darauf, daß sich der Frequenzpegel in dem in **Abb. 9** aufgezeigten Bereich befindet.

FRANÇAIS

METHODES DES MEASURES ET REGLAGES

Appareils de mesure

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio

- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Reglage Azimutal de la tete

1. Faire jouer la portion du réglage de l'azimuth (8kHz, -20dB) de la bande d'essai (QZZCFM). Ajuster la vis de la mise au point azimuthale jusqu'à ce que les sorties du canal de gauche et du canal de droite soient maximisées et que la forme d'onde de Lissajous, comme il est illustré, approche de 0 degré.

Nota:

Si le canal de gauche et canal de droite ne sont pas maximisés au même point, régler le point où les niveaux de chaque canal sont maximisés et égaux.

2. Effectuer le même réglage sur le mode d'audition.
3. Après cela, mettre une goutte de vernis de blocage sur la vis de réglage de l'azimut.

Reglage de L'amplification Totale

1. Introduire la bande d'essai vierge normale (QZZCRA) et régler l'appareil sur le mode d'intermission d'un disque.
2. Appliquer un signal d'entrée de référence (1kHz, -24dB). Diminuer la sortie de telle sorte que son niveau devienne de 0.4V.
3. Enregistrer ce signal d'entrée.
4. Faire jouer le signal enregistré à l'étape 3 ci-dessus, et s'assurer que la sortie en deçà de la valeur standard.
5. Si elle n'est pas en deçà de la valeur standard, régler VR7 (canal de gauche) et VR8 (canal de droite).
6. Répéter les étapes 2~5 ci-dessus jusqu'à ce que la sortie soit en deçà de la valeur standard.

Reglage de la Vitesse de Defilement

1. Faire jouer la portion médiane de la bande d'essai (QZZCWAT).
2. Régler le régulateur de tension dans le moteur de telle sorte que la sortie soit en deçà de la valeur standard.

Reglage de L'amplification de Lecture

1. Faire jouer la partie réglée de l'amplification (315Hz, 0dB) de la bande d'essai (QZZCFM).
2. Régler VR5 (canal de gauche) et VR6 (canal de droite) de telle sorte que la sortie soit en deçà de la valeur standard.

Reponse en Frequence de la Lecture

1. Faire jouer la partie de la réponse en fréquence (315Hz, 12.5kHz, -63Hz, -20dB) de la bande d'essai (QZZCFM).
2. S'assurer que la réponse en fréquence soit en deçà de la plage montrée dans la Fig. 6, à la fois pour le canal de gauche et le canal de droite.

Reponse en Frequence Totale

1. Introduire la bande d'essai vierge normale (QZZCRA) et régler l'appareil sur le mode d'intermission d'un disque.
2. Appliquer un signal d'entrée de référence (1kHz, -24dB) par l'intermédiaire d'un atténuateur.
3. Diminuer le signal de 20dB et régler la fréquence de 50Hz~10.0kHz.
4. Enregistrer le balayage de fréquence.
5. Faire jouer le signal enregistré et s'assurer qu'il soit en deçà de la plage montrée à la Fig. 8 en comparaison à la fréquence de référence (1kHz).
6. S'il n'est pas en deçà de la plage standard, régler VR301 (canal de gauche) et VR302 (canal de droite) de telle sorte que le niveau de fréquence soit en deçà de la plage standard.
7. Répéter les étapes 2~6 ci-dessus en utilisant la bande CrO₂ (QZZCRX) et la bande métallisée (QZZCRX) en augmentant la plage de fréquence à 12.5kHz (50Hz~12.5kHz).
8. S'assurer que le niveau soit en deçà de la plage montrée à la Fig. 9.

ESPAÑOL

METODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltímetro electrónico)
- Osciloscopio
- Frecuencímetro digital
- Oscilador AF

- ATT (Atenuador)
- Voltímetro CC
- Resistor (600Ω)

Ajuste Azimutal de Cabeza

1. Reproducir la porción de ajuste azimutal (8kHz, -20dB) de la cinta de prueba (QZZCFM). Variar el tornillo de ajuste azimutal hasta que las salidas del CH-I y CH-D se maximicen y la forma de onda de lissajous, como ilustrado, se acerque a grado 0.

Nota:

Si CH-I y CH-D no son maximizados en el mismo punto, ajustar al punto donde los niveles de cada canal sean maximizados e igualados.

2. Efectuar el mismo ajuste en la modalidad de reproducción.
3. Después del ajuste, aplique pintura de fijación al tornillo de ajuste del azimut.

Ajuste de Ganancia Total

1. Insertar la cinta de prueba en blanco normal (QZZCRA) y poner la unidad en modalidad de pausa de Grabación.
2. Aplicar la señal de entrada de referencia (1kHz, -24dB). Atenuar la salida de manera que su nivel se haga 0.4V.
3. Grabar la señal de entrada.
4. Reproducir la señal grabada en el paso 3 de arriba y asegurarse de que la salida esté dentro del valor estándar.
5. Si no está dentro del valor estándar, ajustar **VR7** (CH-I) y **VR8** (CH-D).
6. Repetir el paso 2~5 de arriba hasta que la salida esté dentro del valor estándar.

Ajuste de Velocidad de Cinta

1. Reproducir la porción de la cinta prueba (QZZCWAT).
2. Ajustar el **VR** en el motor de manera que salida esté dentro del valor estándar.

Ajuste de Ganancia de Reproduccion

1. Reproducir la porción ajustada de ganancia (315Hz, 0dB) de la cinta de prueba (QZZCFM).
2. Ajustar **VR5** (CH-I) y **VR6** (CH-D) de manera que la salida esté dentro del valor estándar.

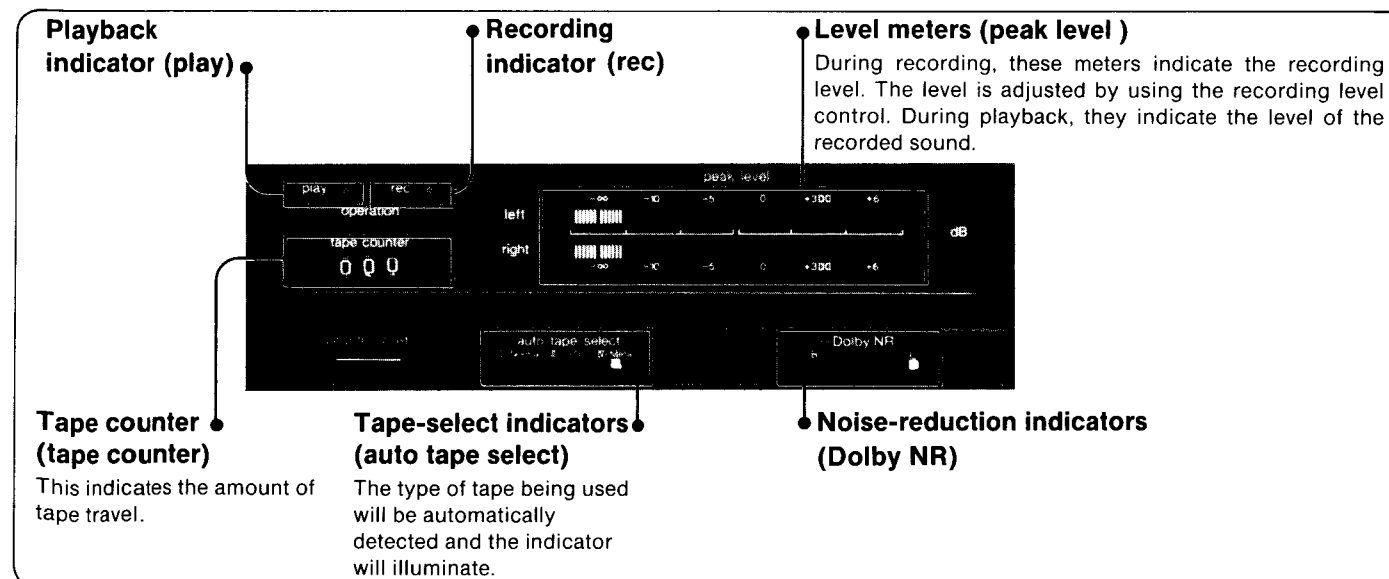
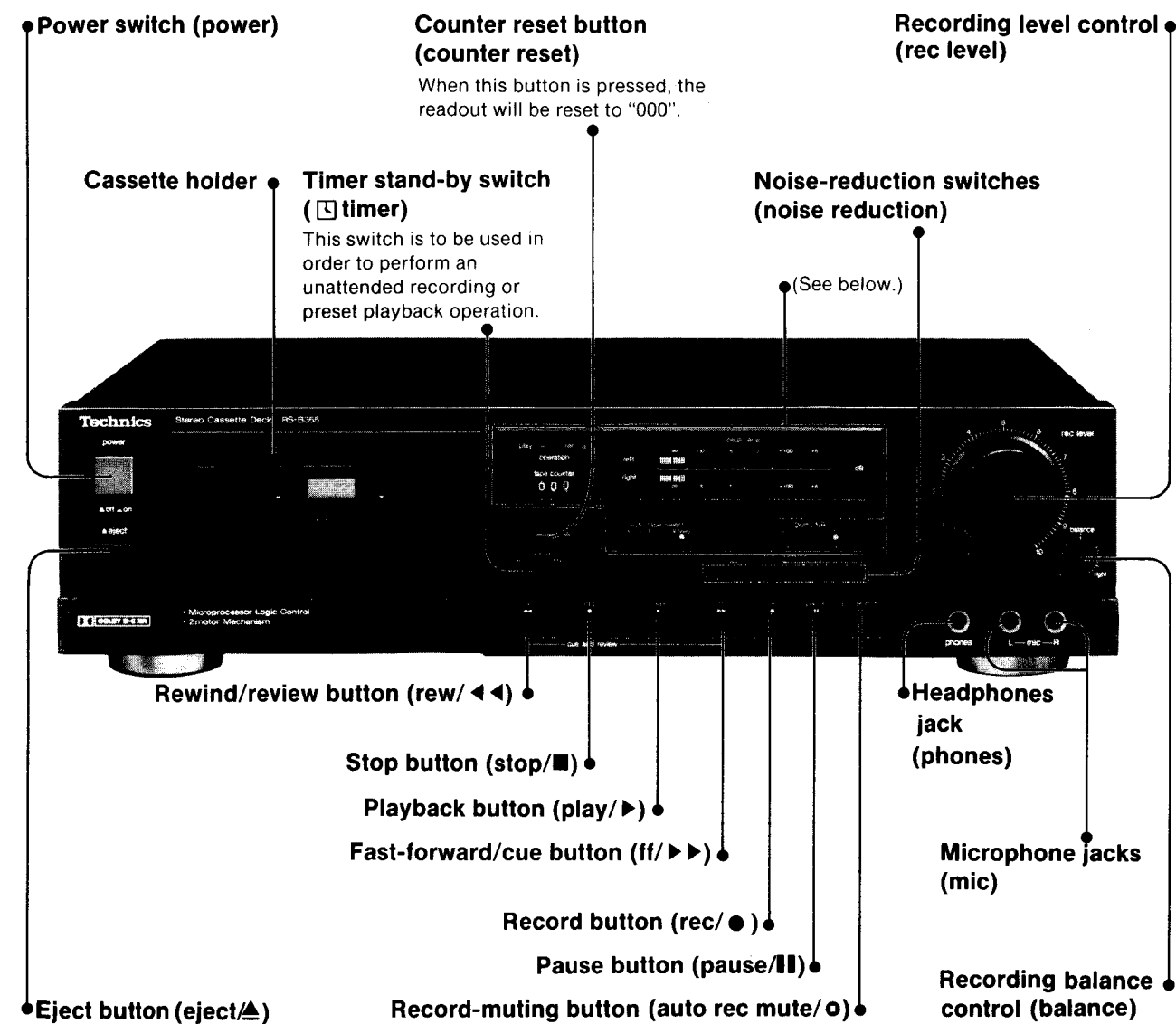
Respuesta de Frecuencia de Reproduccion

1. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12.5kHz~63Hz, -20dB) de la cinta de prueba (QZZCFM).
2. Asegurarse de que la respuesta de frecuencia esté dentro de la gama mostrada en la **Fig. 6** para ambos CH-I y CH-D.

Respuesta de Frecuencia Total

1. Poner una cinta virgen normal (QZZCRA) y poner la unidad en la modalidad de Pausa de Grabación.
2. Aplicar la señal de entrada de referencia (1kHz, -24dB) a través de un atenuador.
3. Atenuar la señal por 20dB y ajustar la frecuencia de 50Hz~10.0kHz.
4. Grabar el barrido de frecuencia.
5. Reproducir la señal grabada y asegurarse de que esté dentro de la gama mostrada en la **Fig. 8** en comparación con la frecuencia de referencia (1kHz).
6. Si no está dentro de la gama de frecuencia, ajustar **VR301** (CH-I) y **VR302** (CH-D) de manera que el nivel de frecuencia esté dentro de la gama estándar.
7. Repetir los pasos 2~6 de arriba utilizando la cinta CrO₂ (QZZCRX) y la cinta metálica (QZZCRZ) incrementando la gama de frecuencia a 12.5kHz (50Hz~12.5kHz).
8. Asegurarse de que el nivel esté dentro de la gama mostrada en la **Fig. 9**.

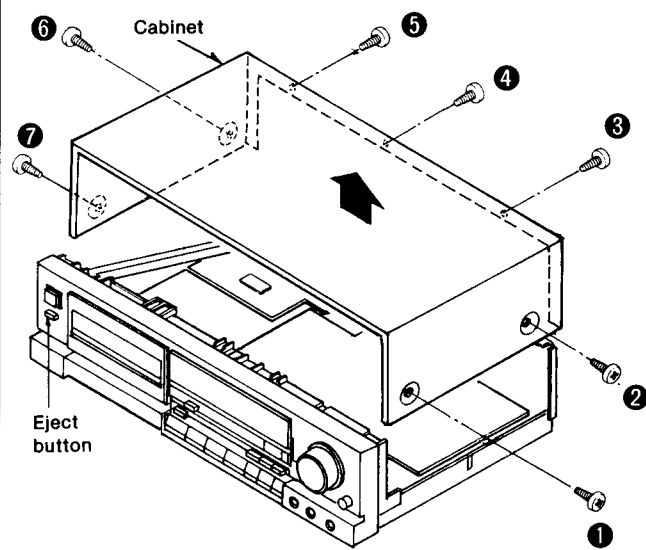
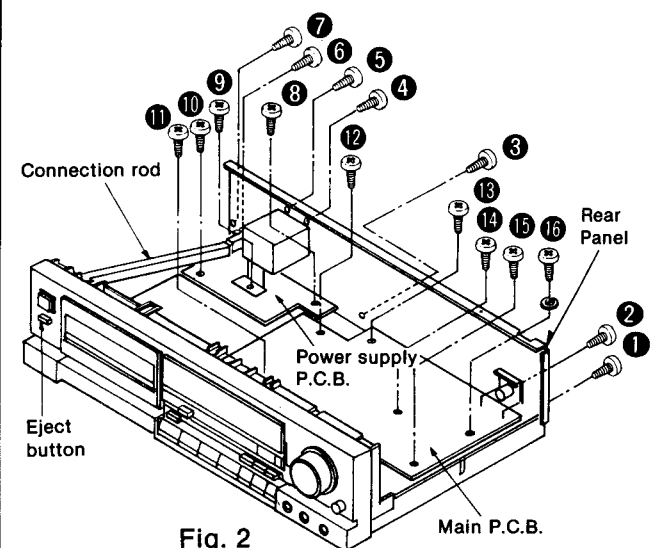
LOCATION OF CONTROLS



DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

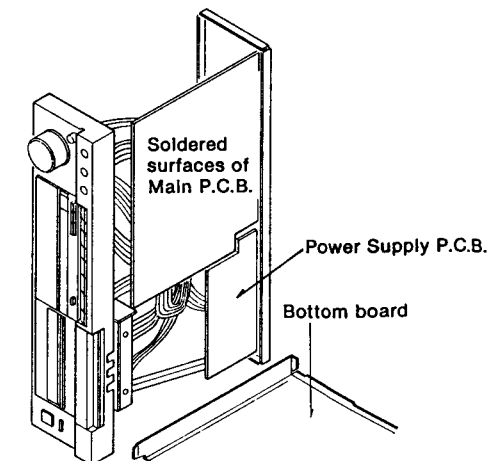
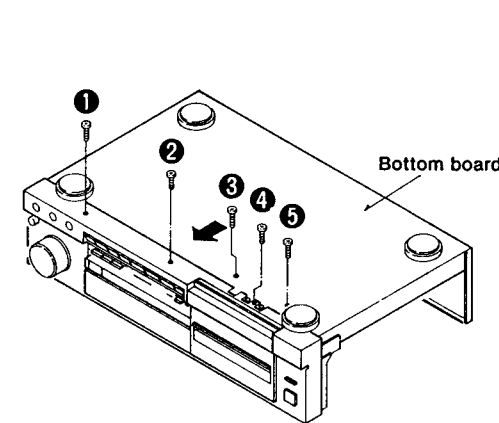
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1	How to remove the Cabinet	Ref. No. 2	How to remove the Power supply P.C.B. and the Main P.C.B.
Procedure 1	Remove the 7 screws (①~⑦).	Procedure 1→2	- Remove the 7 screws (①~⑦), and then remove the Rear panel. - Remove the connection rod. - Remove the 3 screws (⑧~⑩). - Remove the Power supply P.C.B. - Remove the 6 screws (⑪~⑯). - Remove the Main P.C.B.
 Fig. 1		 Fig. 2	

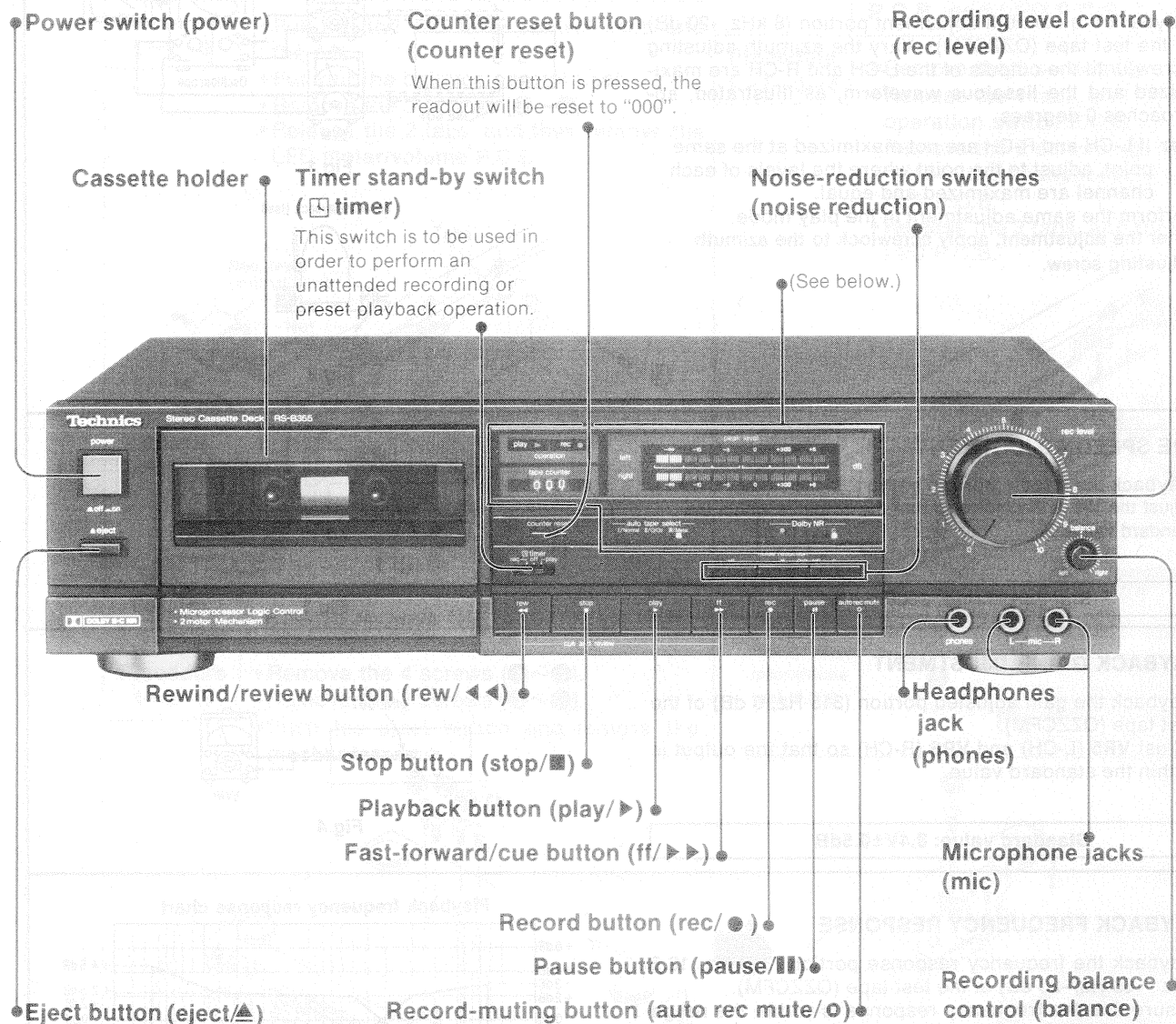
How to check the Main P.C.B.

• When checking the soldered surfaces of Main P.C.B. and replacing the parts, do as shown.

1. Remove the Main P.C.B. and Power supply P.C.B.
2. Remove the 5 screws (①~⑤), and then remove the Bottom board.



LOCATION OF CONTROLS



Playback indicator (play)

Recording indicator (rec)

Level meters (peak level)

During recording, these meters indicate the recording level. The level is adjusted by using the recording level control. During playback, they indicate the level of the recorded sound.

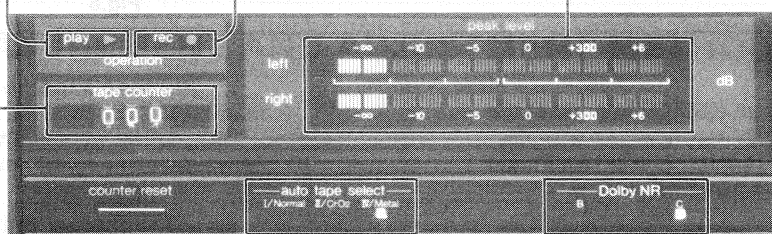
Tape counter (tape counter)

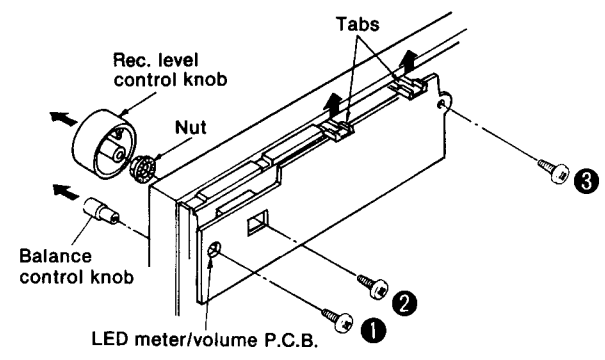
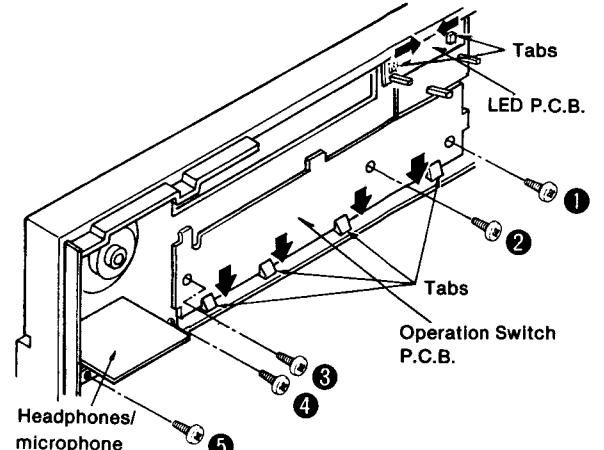
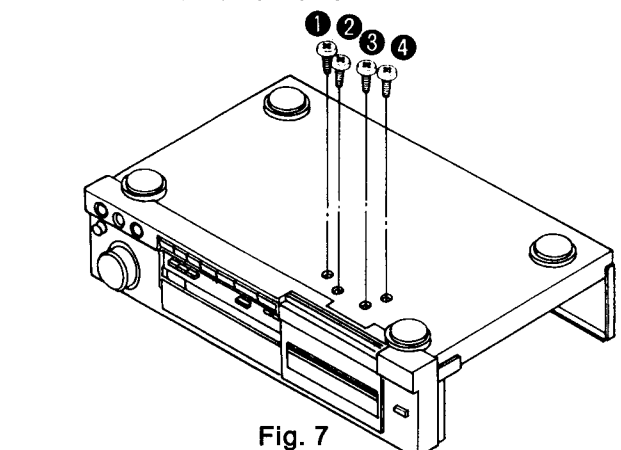
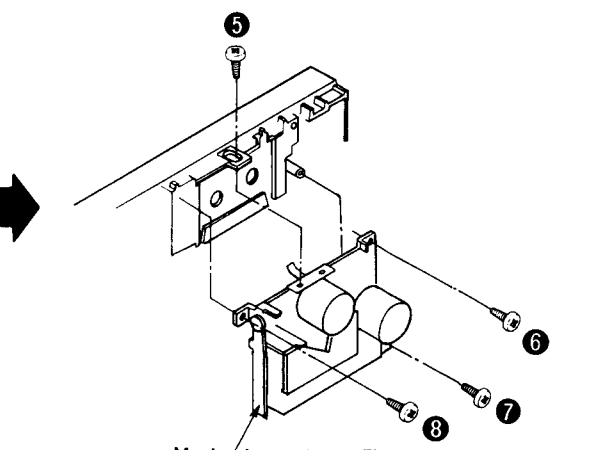
This indicates the amount of tape travel.

Tape-select indicators (auto tape select)

The type of tape being used will be automatically detected and the indicator will illuminate.

Noise-reduction indicators (Dolby NR)



Ref. No. 3	How to remove the LED meter/ volume P.C.B.	Ref. No. 4	How to remove the operation switch P.C.B., headphones/microphone jack P.C.B. and LED P.C.B.
Procedure 1→2→3	• Pull out the rec. level control knob and the nut. • Pull out the balance control knob. • Remove the 3 screws (①~③). • Release the 2 tabs, and then remove the LED meter/volume P.C.B.	Procedure 1→2→3→4	• Remove the 3 screws (①~③). • Release the 4 tabs, and then remove the operation switch P.C.B. • Remove the 2 screws (④, ⑤), and then remove the headphones/microphone jack P.C.B. • Release the 2 tabs, and then remove the LED P.C.B.
 Fig. 5		 Fig. 6	
Ref. No. 5	How to remove the mechanism unit.		
Procedure 1→2→5	• Remove the 4 screws (①~④). • Remove the 3 screws (⑤~⑦). • Push the eject button and remove the mechanism unit.		
 Fig. 7		 Fig. 8	

MEASUREMENT AND ADJUSTMENT METHODS

Measurement Condition

- Rec. level control; Maximum
- Timer stand-by switch; Off
- Noise reduction select switch; Off

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB); QZZCFM

- Balance control; Center
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)

- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment Normal reference blank tape; QZZCRA
- CrO₂ reference blank tape; QZZCRX
- Metal reference blank tape; QZZCRZ

HEAD AZIMUTH ADJUSTMENT

1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-CH and R-CH are maximized and the lissajous waveform, as illustrated, approaches 0 degrees.

Note: If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

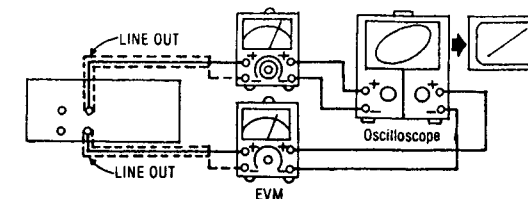


Fig.1

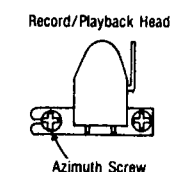


Fig.2

TAPE SPEED ADJUSTMENT

1. Playback the middle portion of the test tape (QZZCWAT).
2. Adjust the VR in the motor so that the output is within the standard value.

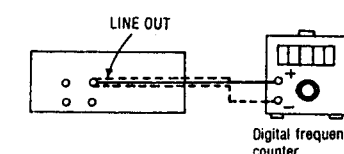


Fig.3

Standard value: 3000 ± 15Hz

PLAYBACK GAIN ADJUSTMENT

1. Playback the gain adjusted portion (315 Hz, 0 dB) of the test tape (QZZCFM).
2. Adjust VR5 (L-CH) and VR6 (R-CH) so that the output is within the standard value.

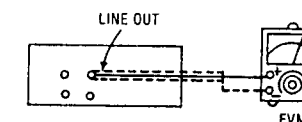


Fig.4

Standard value: 0.4V ± 0.5dB

PLAYBACK FREQUENCY RESPONSE

1. Playback the frequency response portion (315 Hz, 12.5 kHz ~ 63 Hz, -20 dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in Fig. 6 for both L-CH and R-CH.

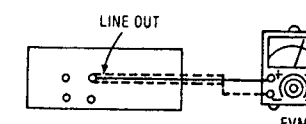


Fig.5

Playback frequency response chart

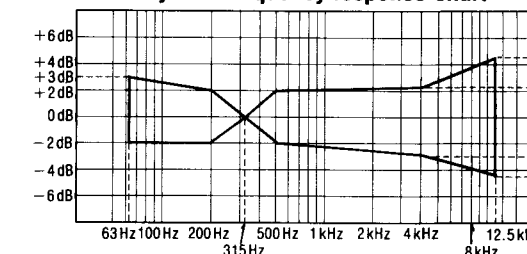


Fig.6

OVERALL GAIN ADJUSTMENT

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1 kHz, -24 dB). Attenuate the output so that its level becomes 0.4V.
3. Record this input signal.
4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
5. If it is not within the standard value, adjust VR7 (L-CH) and VR8 (R-CH).
6. Repeat the step 2 ~ 5 above until the output is within the standard value.

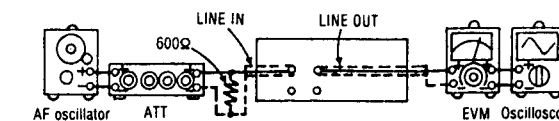


Fig.7

Standard value: 0.4V ± 0.5dB

OVERALL FREQUENCY RESPONSE

1. Insert the a Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1 kHz, -24 dB) through an attenuator.
3. Attenuate the signal by 20 dB and adjust the frequency from 50 Hz ~ 10.0kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in Fig.8 in comparison to the reference frequency (1 kHz).
6. If it is not within the standard range, adjust VR301 (L-CH) and VR302 (R-CH) so that the frequency level is within the standard range.
7. Repeat steps 2 ~ 6 above using the CrO₂ tape(QZZCRX) and the Metal tape(QZZCRZ) increasing the frequency range to 12.5kHz (50Hz~12.5kHz).
8. Assure that the level is within the range shown in Fig.9.

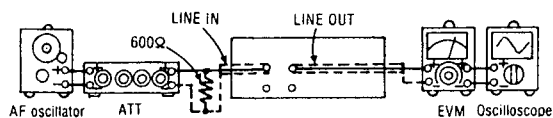


Fig.10

Normal Overall frequency response chart (NR OUT)

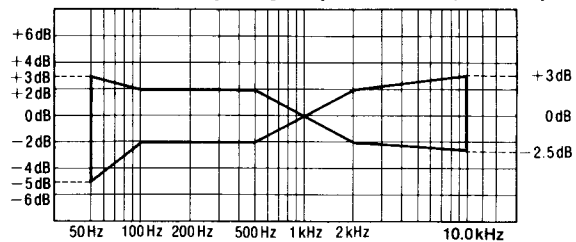


Fig.8

CrO₂ Metal Overall frequency response chart (NR OUT)

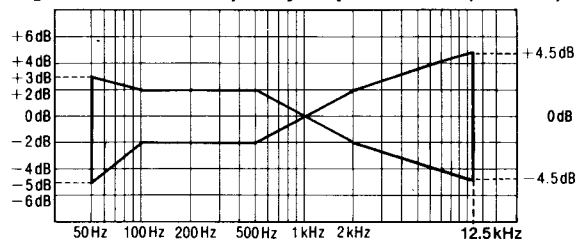
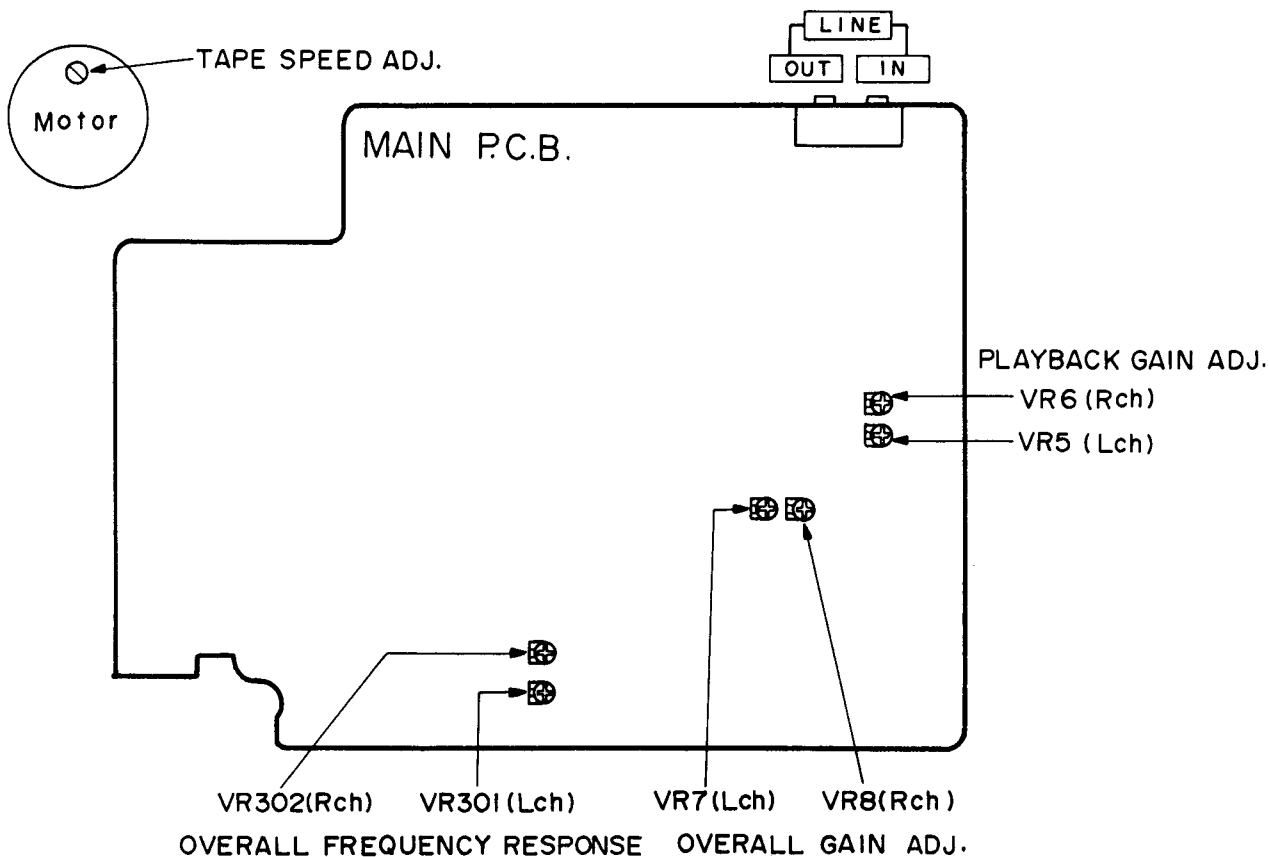


Fig.9

• Adjustment Points



■ MICROCOMPUTER TERMINAL FUNCTION

(IC801: M50720-411SP)

* This microcomputer is used for mechanical operation.

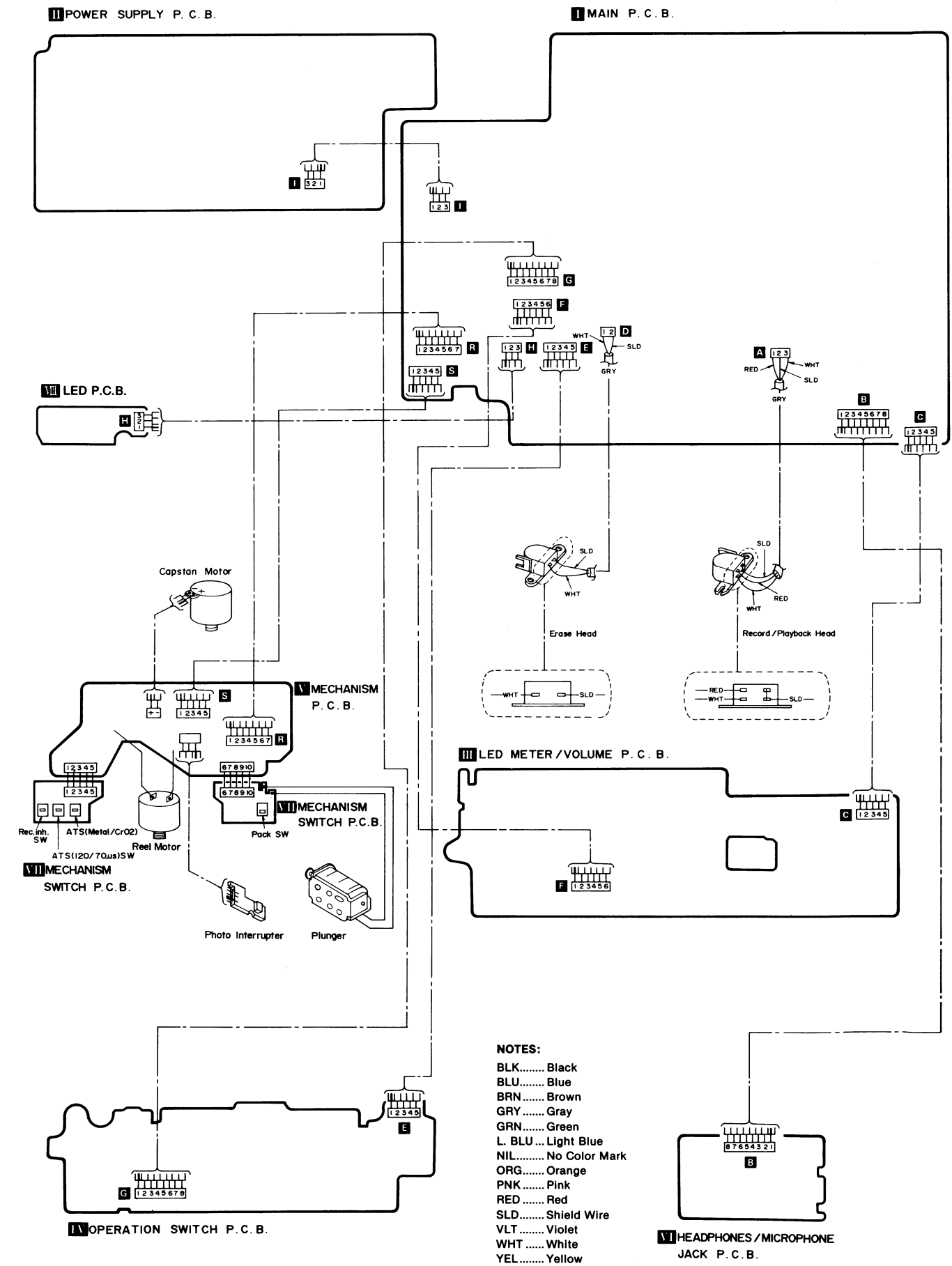
Pin No.	Symbol	In/Out	Function/operation
1	NRB	In/Out	Reading of DOLby B switch (S10) & Dolby B LED control. •“L” input when switch (S10) is on mode. •“H” input when switch (S10) is off mode. •Dolby B LED turned on when output level is “L”. •Dolby B LED turned off when output level is “H”.
2	NRC	In/Out	Reading of Dolby C switch (S11) & Dolby C LED control. •Input level is “L” when switch (S11) is on mode. •Input level is “H” when switch (S11) is off mode. •Dolby C LED turned on when output level is “L”. •Dolby C LED turned off when output level is “H”.
3	NRX	In/Out	•Usually “H” level.
4	X _{OUT}	Output	•Clock OSC terminal.
5	X _{IN}	Input	
6	CE	Input	Reset input terminal. •Connected to V_{DD} (+5V).
7	$\overline{\text{RESET}}$	Input	Reset terminal (The microcomputer is reset when “L” level is applied for longer than one machine cycle.).
8	V _{DD}	Input	Power supply terminal.
9	CNTR	———	Timer terminal. •Not used in this unit (Connected to GND).
10	INT	———	External interruption input terminal. •Not used in this unit (Connected to GND).
11	C	———	Terminal with external capacitor. •Not used in this unit.
12	$\overline{\text{R/P}}$	Output	Record/playback selector & Rec LED control. •Record mode and Rec LED turned on when output level is “L”. •Playback mode and Rec LED turned off when output level is “H”.
13	$\overline{\text{BIAS}}$	Output	Bias OSC control. •When output level is “L”, Bias oscillation is state. •When output level is “H”, Bias oscillation is stop.

Pin No.	Symbol	In/Out	Function/operation												
14	$\overline{120/70}$	Output	Playback equalizer (120μs/70μs) selector. •Equalizer is 120μs mode when output level is “L”. •Equalizer is 70μs mode when output level is “H”.												
15	CUE/REV	Output	In CUE/REVIEW action, the muting of playback amplifier is canceled. The muting of recording amplifier is also turned on or off.												
16	MMT	Output	Meter mute control. •Meter muting is on mode when output level is “L”. •Meter muting is off mode when output level is “H”.												
17	NR IN/OUT	Output	Noise reduction selector.												
18	Dolby B	Output	<table><tr><td> </td><td>NR OUT</td><td>Dolby B</td><td>Dolby C</td></tr><tr><td>17</td><td>H</td><td>L</td><td>L</td></tr><tr><td>18</td><td>H</td><td>H</td><td>L</td></tr></table>		NR OUT	Dolby B	Dolby C	17	H	L	L	18	H	H	L
	NR OUT	Dolby B	Dolby C												
17	H	L	L												
18	H	H	L												
19	dbx	————	•Not used in this unit.												
20	CNV _{SS}	————	•Connected to V _{SS} .												
21	V _{SS}	————	•Connected to GND.												
22	RMF	Output	Reel motor rotation control.												
23	RMR	Output	<table><tr><td> </td><td>Forward direction</td><td>Reverse direction</td><td>Stop</td></tr><tr><td>22</td><td>H</td><td>L</td><td>L</td></tr><tr><td>23</td><td>L</td><td>H</td><td>L</td></tr></table>		Forward direction	Reverse direction	Stop	22	H	L	L	23	L	H	L
	Forward direction	Reverse direction	Stop												
22	H	L	L												
23	L	H	L												
24	RPC	Output	Reel motor torque control. •Torque is Low (playback mode) when output level is “L”. •Torque is Hight (FF/Rew mode) when output level is “H”.												
25	CPM	Output	Capstan motor control. •Capstan motor activated when output level is “L”. •Capstan motor inactivated when output level is “H”.												
26	SOL	Output	Plunger drive control.												
27	SOLP	Output													

Pin No.	Symbol	In/Out	Function/operation																				
28	DMT	Output	Direct muting (DMT) signal. • Direct mute is on mode when output level is "L". • Direct mute is off mode when output level is "H".																				
29	PLAY LED	Output	Playback LED control. • Playback LED turned on when output level is "L". • Playback LED turned off when output level is "H".																				
30	UP/DOWN	—	Counter up/down command. • Not used in this unit.																				
31	LMT	Output	Lineout mute control. • Lineout mute is on mode when output level is "L". • Lineout mute is off mode when output level is "H".																				
32	PLS	Input	Rotation pulse signal of reel table.																				
33	POF	Input	Detection of power supply. • Input level is "L" when power supply is off mode. • Input level is "H" when power supply is on mode.																				
34	REC INH	Input	Rec. inhibit input. • Input level is "L" when rec. inhibit switch is on mode. • Input level is "H" when rec. inhibit switch is off mode.																				
35	SCAN 3	Output	Key scan output.																				
36	SCAN 2	Output																					
37	SCAN 1	Output																					
38 39 40 41	} KEY IN	Input	Key scan input. • Input level is "L" when switch is on mode. • Input level is "H" when switch is cue/rev mode. <table border="1"> <thead> <tr> <th></th><th>37 "L" level</th><th>36 "L" level</th><th>35 "L" level</th></tr> </thead> <tbody> <tr> <td>38</td><td>STOP</td><td>NR OFF</td><td>CUE/REV</td></tr> <tr> <td>39</td><td>PLAY</td><td>AUTO REC. MUTE</td><td>TIMER PLAY</td></tr> <tr> <td>40</td><td>REC.</td><td>REW</td><td>TIMER REC</td></tr> <tr> <td>41</td><td>PAUSE</td><td>FF</td><td>Usually "H" level</td></tr> </tbody> </table>		37 "L" level	36 "L" level	35 "L" level	38	STOP	NR OFF	CUE/REV	39	PLAY	AUTO REC. MUTE	TIMER PLAY	40	REC.	REW	TIMER REC	41	PAUSE	FF	Usually "H" level
	37 "L" level	36 "L" level	35 "L" level																				
38	STOP	NR OFF	CUE/REV																				
39	PLAY	AUTO REC. MUTE	TIMER PLAY																				
40	REC.	REW	TIMER REC																				
41	PAUSE	FF	Usually "H" level																				

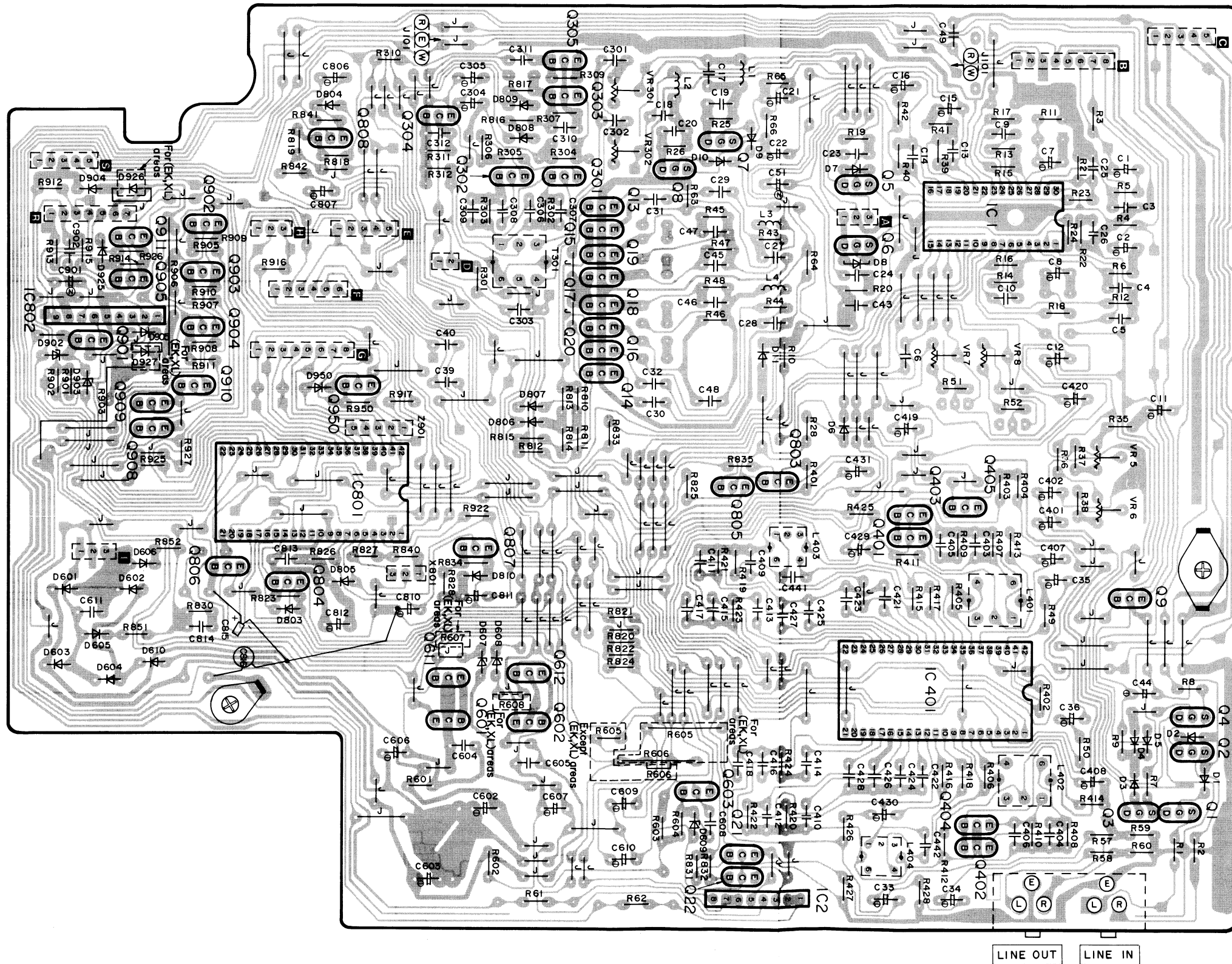
Pin No.	Symbol	In/Out	Function/operation
42	ATS	Input	Auto tape selector (ATS). •Input level is “L” when ATS is on mode (Normal tape). •Input level is “H” when ATS is off mode (CrO₂, Metal tape).

■ WIRING CONNECTION DIAGRAM

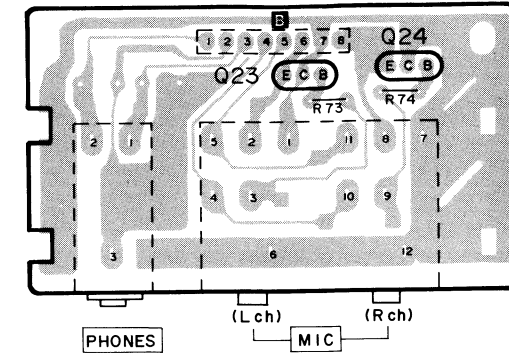


PRINTED CIRCUIT BOARDS

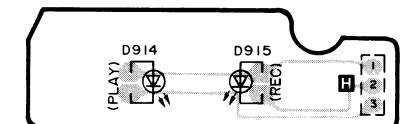
I MAIN P.C.B.



VI HEADPHONES/MICROPHONE JACK P.

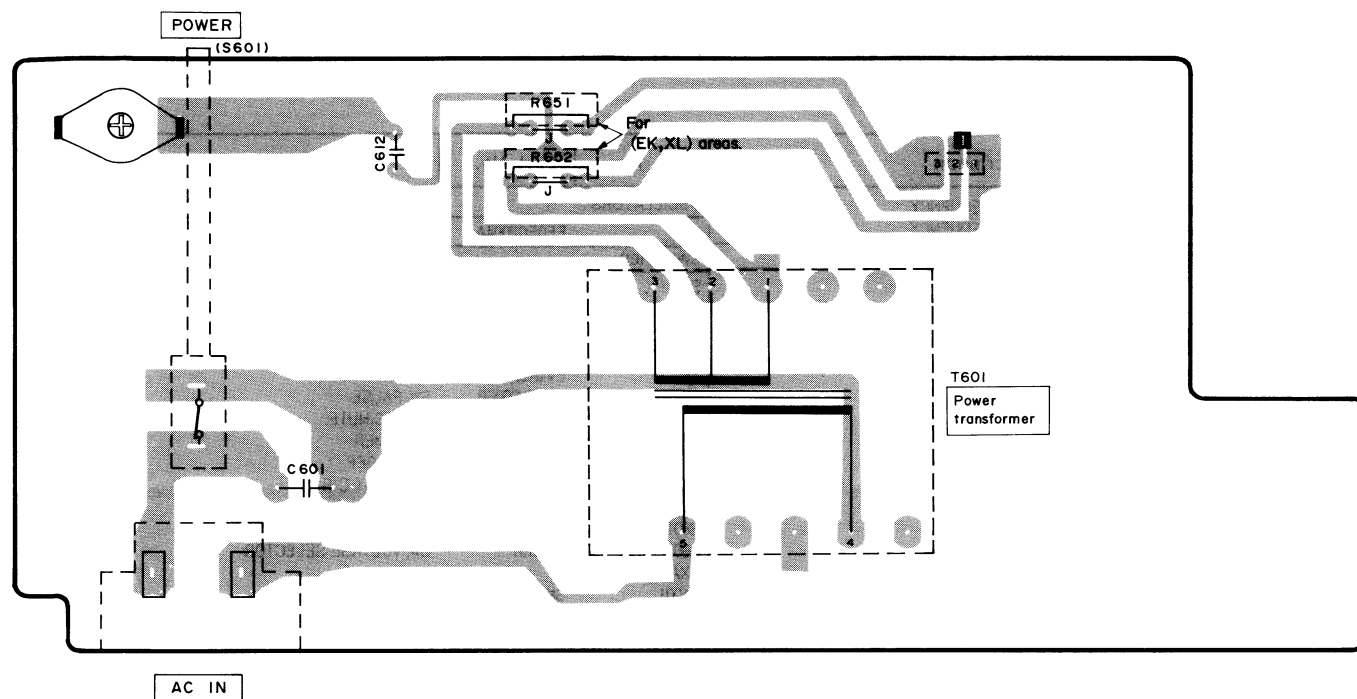


VIII LED P.C.B.

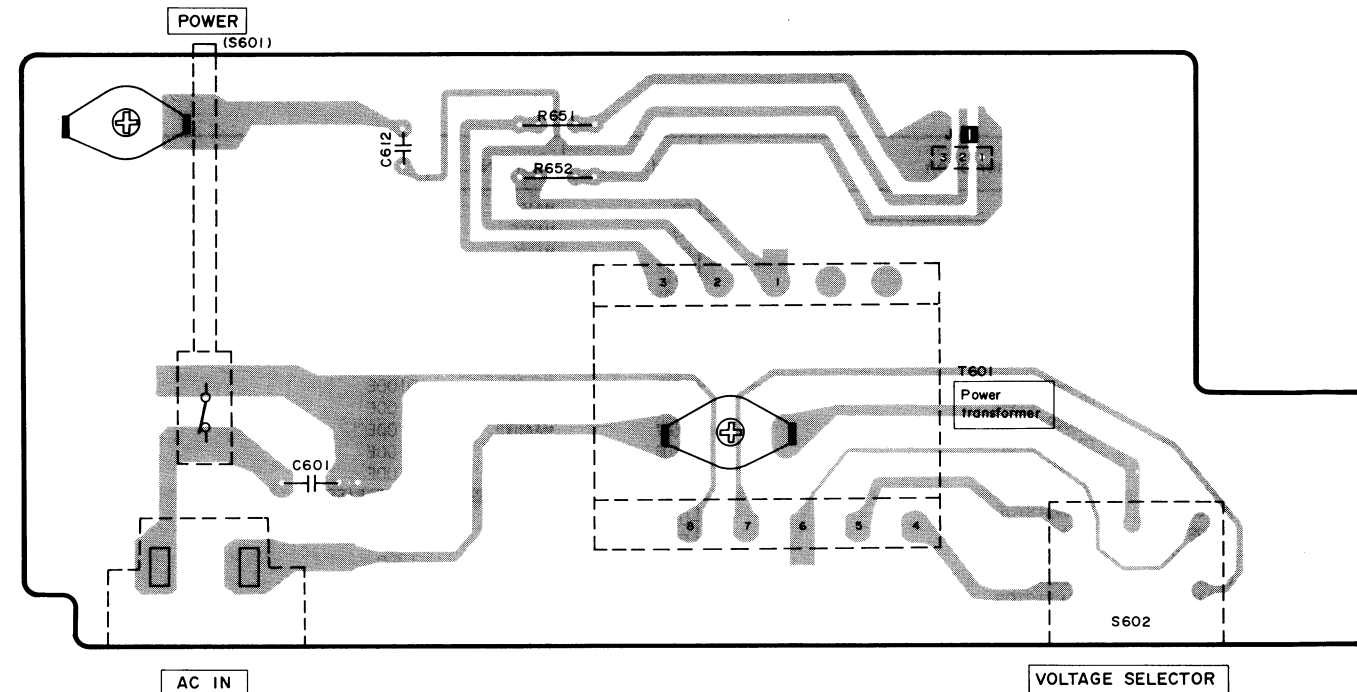


11 12 13 14 15 16 17 18 19 20

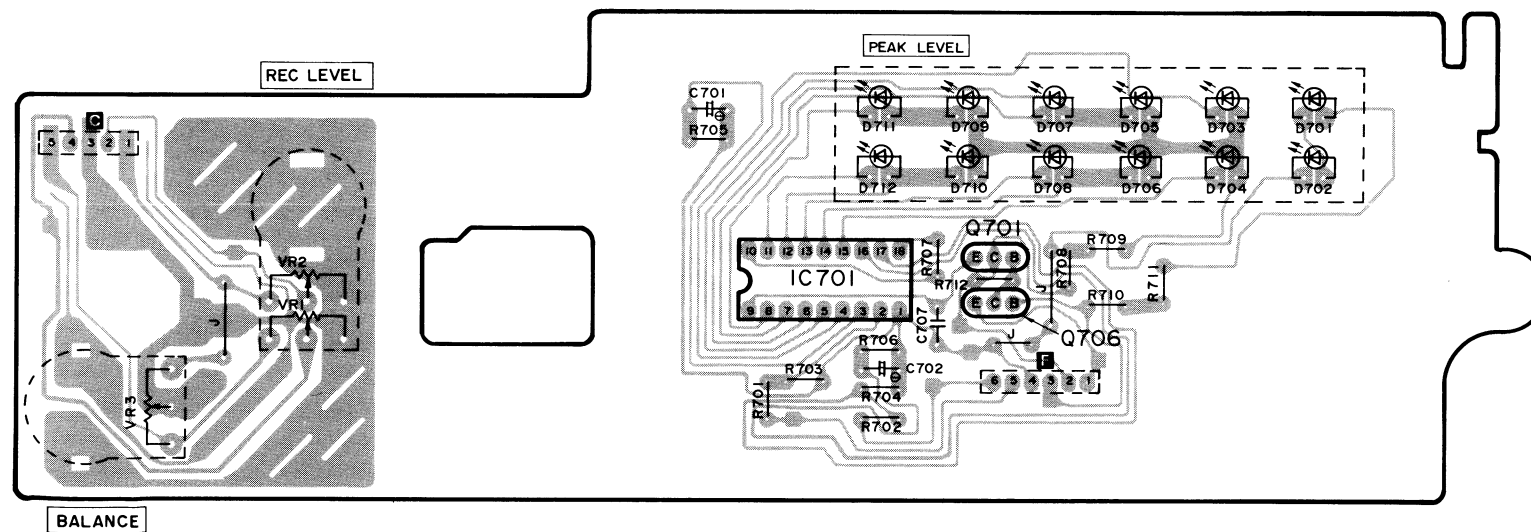
II POWER SUPPLY P.C.B. (E, EK, EG, EH, XL)



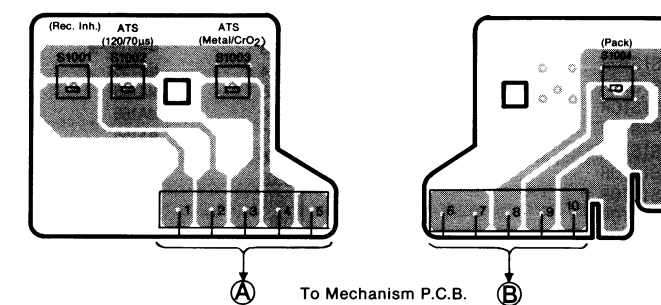
II POWER SUPPLY P.C.B. (XA, XB)



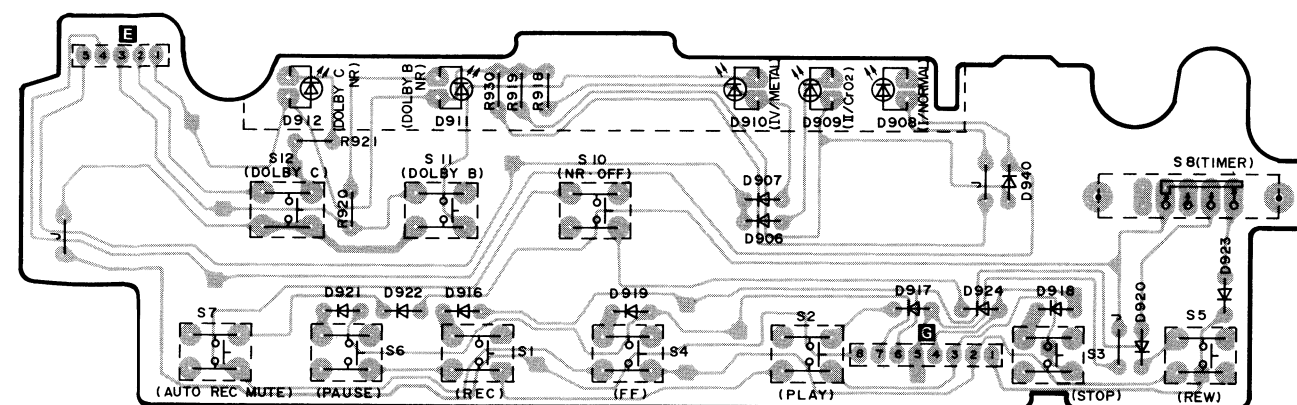
III LED METER/VOLUME P.C.B.



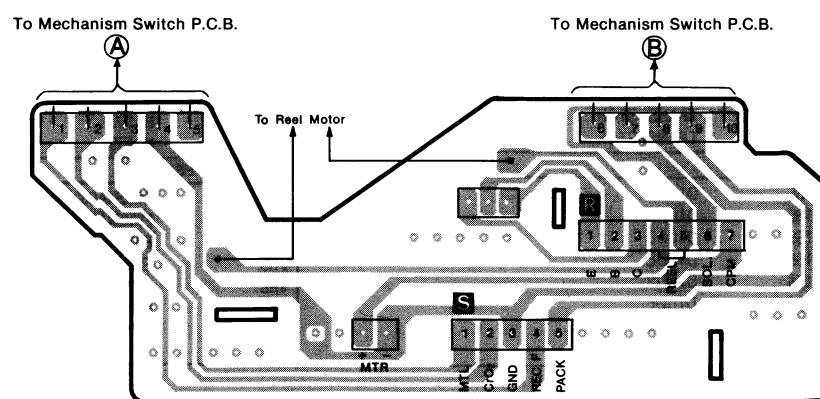
V MECHANISM P.C.B.



IV OPERATION SWITCH P.C.B.



VII MECHANISM SWITCH P.C.B.



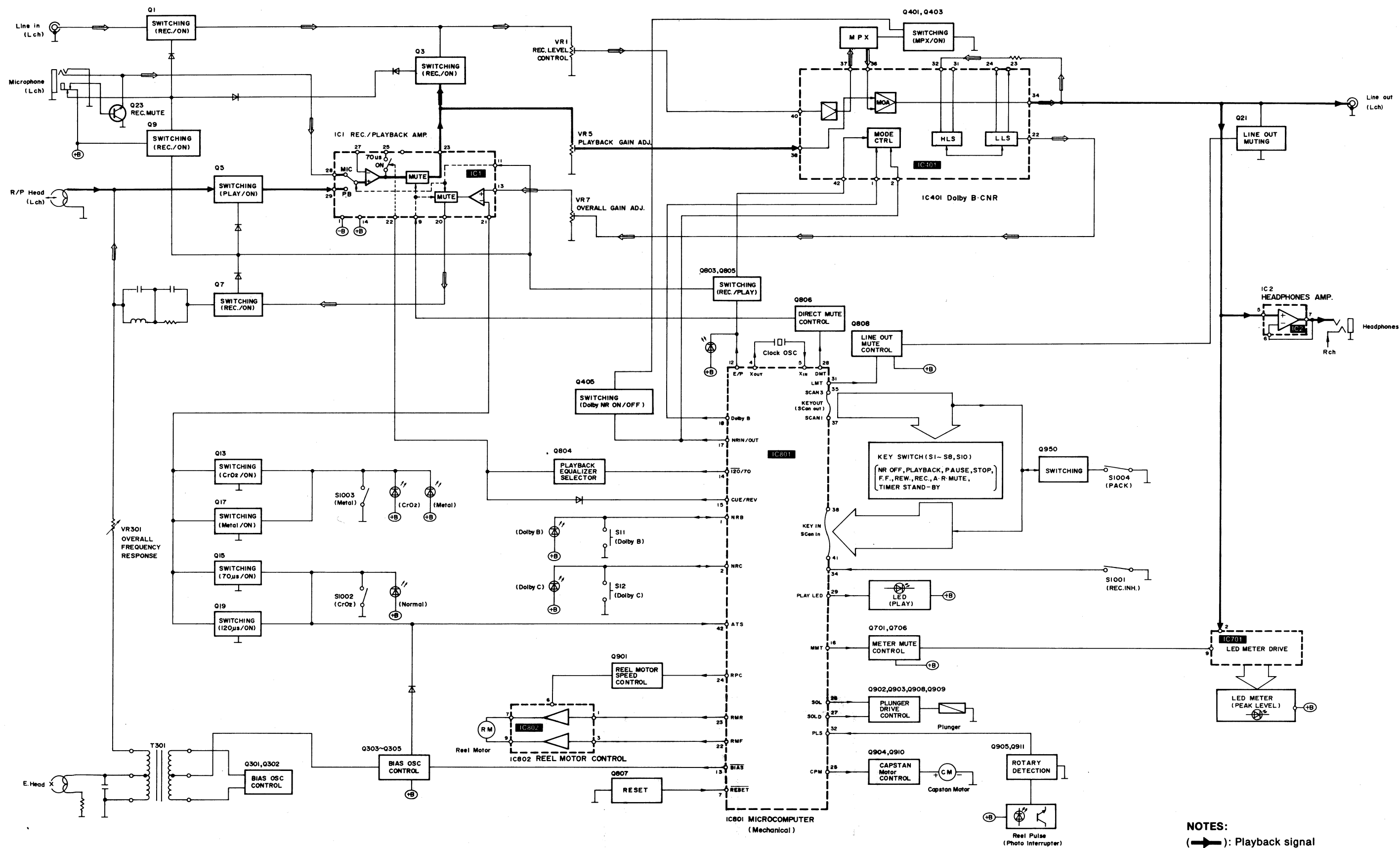
■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by $\triangle$ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			D8	MA165	DIODE
IC1	AN7016NK	I.C.REC/PLAYBACK AMP	D9	MA165	DIODE
IC2	M5218L	I.C.HEADPHONES AMP	D10	MA165	DIODE
IC401	CX20187	I.C.DOLBY B C NR	D11	MA165	DIODE
IC701	AN6888	I.C.LED METER DRIVE	D601	$\triangle$ SVD1SR35200A	RECTIFIER
IC801	M50720-411SP	I.C.MICRO COMPUTER	D602	$\triangle$ SVD1SR35200A	RECTIFIER
IC802	BA6218	I.C.REEL MOTOR CONTROL	D603	$\triangle$ SVD1SR35200A	RECTIFIER
TRANSISTORS			D604	$\triangle$ SVD1SR35200A	RECTIFIER
Q1	2SJ40CD	TRANSISTOR	D605	MA165	DIODE
Q2	2SJ40CD	TRANSISTOR	D606	MA165	DIODE
Q3	2SK381BC	TRANSISTOR	D607	MA4100L	DIODE
Q4	2SK381BC	TRANSISTOR	D608	MA4100L	DIODE
Q5	2SJ40CD	TRANSISTOR	D609	MA4062-M	DIODE
Q6	2SJ40CD	TRANSISTOR	D610	$\triangle$ SVD1SR35200A	RECTIFIER
Q7	2SK381BC	TRANSISTOR	D701	SLR56YC	L.E.D
Q8	2SK381BC	TRANSISTOR	D702	SLR56YC	L.E.D
Q9	UN4113	TRANSISTOR	D703	SLR56YC	L.E.D
Q13	2SA1309AQS	TRANSISTOR	D704	SLR56YC	L.E.D
Q14	2SA1309AQS	TRANSISTOR	D705	SLR56YC	L.E.D
Q15	2SA1309AQS	TRANSISTOR	D706	SLR56YC	L.E.D
Q16	2SA1309AQS	TRANSISTOR	D707	SLR56JRC	L.E.D
Q17	2SC3311A-Q	TRANSISTOR	D708	SLR56JRC	L.E.D
Q18	2SC3311A-Q	TRANSISTOR	D709	SLR56JRC	L.E.D
Q19	2SC3311A-Q	TRANSISTOR	D710	SLR56JRC	L.E.D
Q20	2SC3311A-Q	TRANSISTOR	D711	SLR56JRC	L.E.D
Q21	2SD1330R	TRANSISTOR	D712	SLR56JRC	L.E.D
Q22	2SD1330R	TRANSISTOR	D803	MA165	DIODE
Q23	2SD1330R	TRANSISTOR	D804	MA165	DIODE
Q24	2SD1330R	TRANSISTOR	D805	$\triangle$ SVD1SR35200A	RECTIFIER
Q301	2SC3311A-Q	TRANSISTOR	D806	MA165	DIODE
Q302	2SC3311A-Q	TRANSISTOR	D807	MA165	DIODE
Q303	2SD592ANCQ	TRANSISTOR	D808	MA165	DIODE
Q304	2SB621A-R	TRANSISTOR	D809	MA165	DIODE
Q305	2SB621A-R	TRANSISTOR	D810	MA165	DIODE
Q401	2SC3311A-Q	TRANSISTOR	D902	MA4082H	DIODE
Q402	2SC3311A-Q	TRANSISTOR	D903	MA4056-M	DIODE
Q403	2SC3311A-Q	TRANSISTOR	D904	MA165	DIODE
Q404	2SC3311A-Q	TRANSISTOR	D905	MA165	DIODE
Q405	UN4111	TRANSISTOR	D906	MA165	DIODE
Q601	2SD1265-P	TRANSISTOR	D907	MA165	DIODE
Q602	2SB941-P	TRANSISTOR	D908	LN88RCPP	L.E.D
Q603	2SC3311A-Q	TRANSISTOR	D909	LN38GCPP	L.E.D
Q611	2SC3311A-Q	TRANSISTOR	D910	LN48YCPP	L.E.D
Q612	2SA1309AQS	TRANSISTOR	D911	LN38GCPP	L.E.D
Q701	2SD592ANCQ	TRANSISTOR	D912	LN38GCPP	L.E.D
Q706	UN4211	TRANSISTOR	D914	LN38GCPP	L.E.D
Q803	UN4113	TRANSISTOR	D915	LN88RCPP	L.E.D
Q804	UN4111	TRANSISTOR	D916	MA165	DIODE
Q805	UN4111	TRANSISTOR	D917	MA165	DIODE
Q806	UN4113	TRANSISTOR	D918	MA165	DIODE
Q807	2SC3311A-Q	TRANSISTOR	D919	MA165	DIODE
Q808	2SA1309AQS	TRANSISTOR	D920	MA165	DIODE
Q901	2SD592ANCQ	TRANSISTOR	D921	MA165	DIODE
Q902	2SD592ANCQ	TRANSISTOR	D922	MA165	DIODE
Q903	2SD592ANCQ	TRANSISTOR	D923	MA165	DIODE
Q904	2SA885Q	TRANSISTOR	D924	MA165	DIODE
Q905	2SC3311A-Q	TRANSISTOR	D925	MA165	DIODE
Q908	UN4114	TRANSISTOR	D926	MA165	DIODE
Q909	UN4114	TRANSISTOR	(EK, XL)		
Q910	UN4211	TRANSISTOR	D927	MA165	DIODE
Q911	UN4211	TRANSISTOR	(EK, XL)		
Q950	2SC3311A-Q	TRANSISTOR	D940	MA165	DIODE
DIODES			D950	MA165	DIODE
D1	MA165	DIODE	VARIABLE RESISTORS		
D2	MA165	DIODE	VR1	EWK94A033A54	V.R.REC LEVEL
D3	MA165	DIODE	VR2	EWK94A033A54	V.R.REC LEVEL
D4	MA165	DIODE	VR3	EWHFDAF20G15	V.R.BALANCE
D5	MA165	DIODE	VR5	EVND4AA00B24	V.R.PLAY BACK GAIN
D6	MA165	DIODE	VR6	EVND4AA00B24	V.R.PLAY BACK GAIN
D7	MA165	DIODE	VR7	EVND4AA00B14	V.R.OVERALL GAIN
			VR8	EVND4AA00B14	V.R.OVERALL GAIN

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
VR301	EVND4AA00B15	V.R.OVERALL FREQUENCY	OSCILLATORS		
VR302	EVND4AA00B15	V.R.OVERALL FREQUENCY	X801	EF0FC2004A4	CERAMIC FILTER
COILS AND TRANSFORMERS			SWITCHES		
L1	SLQX303-1K	CHOKE COIL	S1	EVQQB005R	SW.RECORD
L2	SLQX303-1K	CHOKE COIL	S2	EVQQB005R	SW.PLAYBACK
L3	SLQX272-1YT	CHOKE COIL	S3	EVQQB005R	SW.STOP
L4	SLQX272-1YT	CHOKE COIL	S4	EVQQB005R	SW.FF
L401	QLM9Z10K	M.P.X. COIL	S5	EVQQB005R	SW.REW/PAUSE
L402	QLM9Z10K	M.P.X. COIL	S6	EVQQB005R	SW.PAUSE
L403	SLM1B12-K	COIL	S7	EVQQB005R	SW.REC/MUTE
L404	SLM1B12-K	COIL	S8	SSS147-1	SW.TIMER
T301	SL09C19-K	OSCILLATOR COIL	S10	EVQQB005R	SW.NR OFF
T601 $\triangle$	SLT5V23-W	POWER TRANSFORMER	S11	EVQQB005R	SW.DOLBY C/R
(E, EH, EG)			S12	EVQQB005R	SW.DOLBY C NR
T601 $\triangle$	SLT5V25-W	POWER TRANSFORMER	S601 $\triangle$	ESB8249V	SW.POWER
(XA, XB)			S602 $\triangle$	SSR187-1	SW.VOLTAGE SELECTOR
T601 $\triangle$	SLT5V30-W	POWER TRANSFORMER	(XA, XB)		
(EK, XL)			S1001	SMQA1252	SW.REC INHIBIT
COMPONENT COMBINATIONS			S1002	SMQA1252	SW.ATS
Z901	EXBF5E562J	COMPONENT COMBINATION	S1003	SMQA1252	SW.ATS
			S1004	SMQA1252	SW.PACK

BLOCK DIAGRAM



SCHEMATIC DIAGRAM

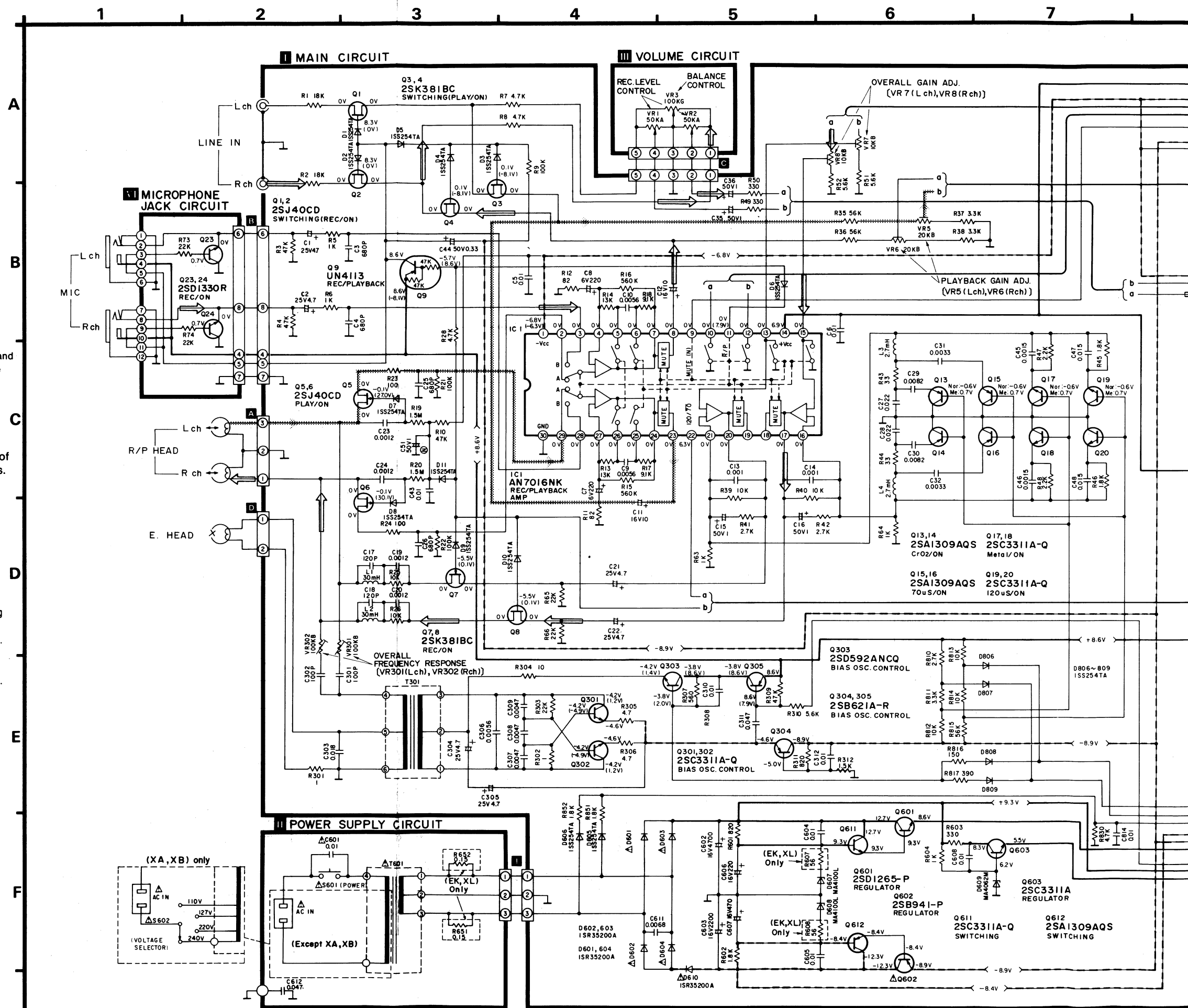
(This schematic diagram may be modified at any time with the development of new technology.)

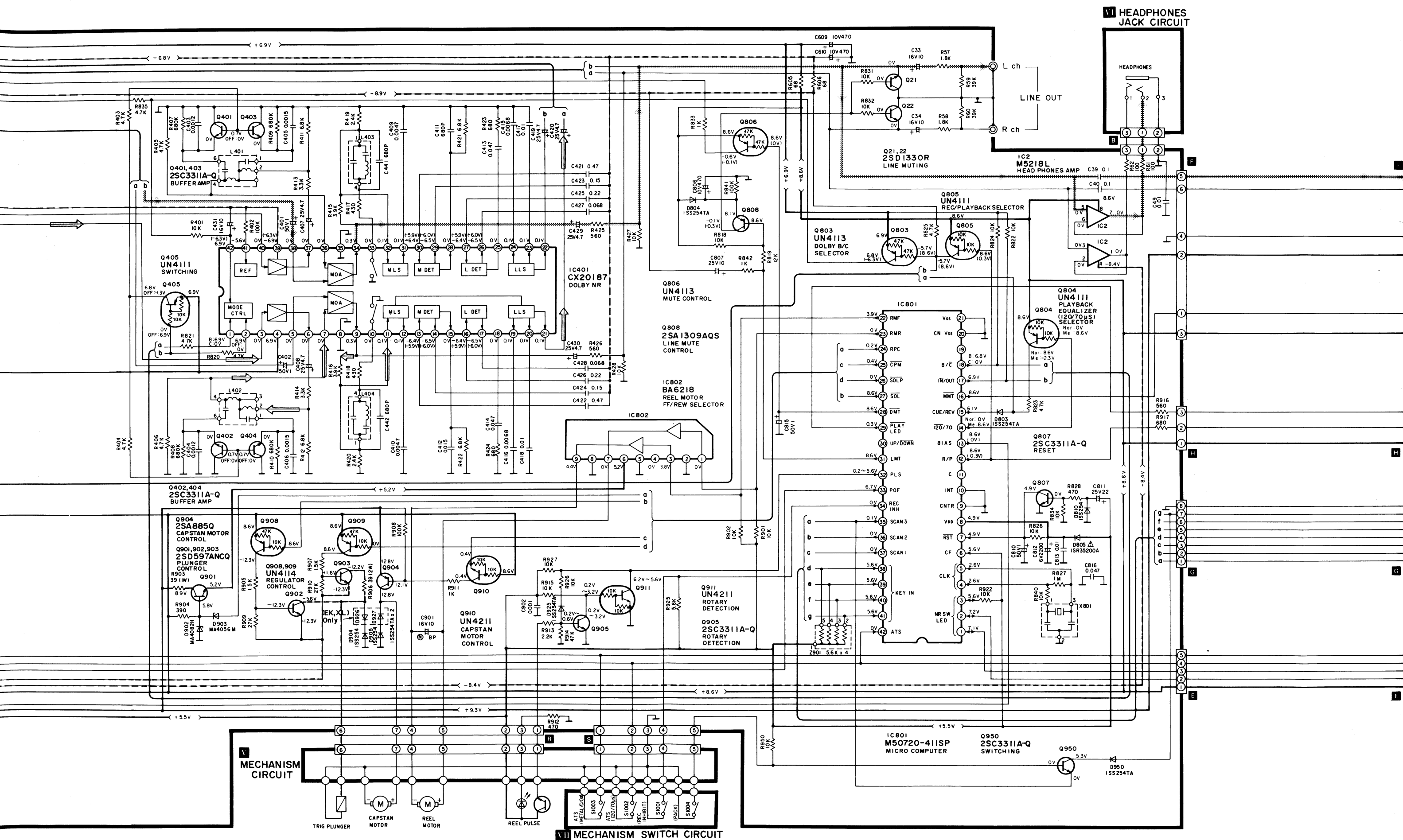
Notes:

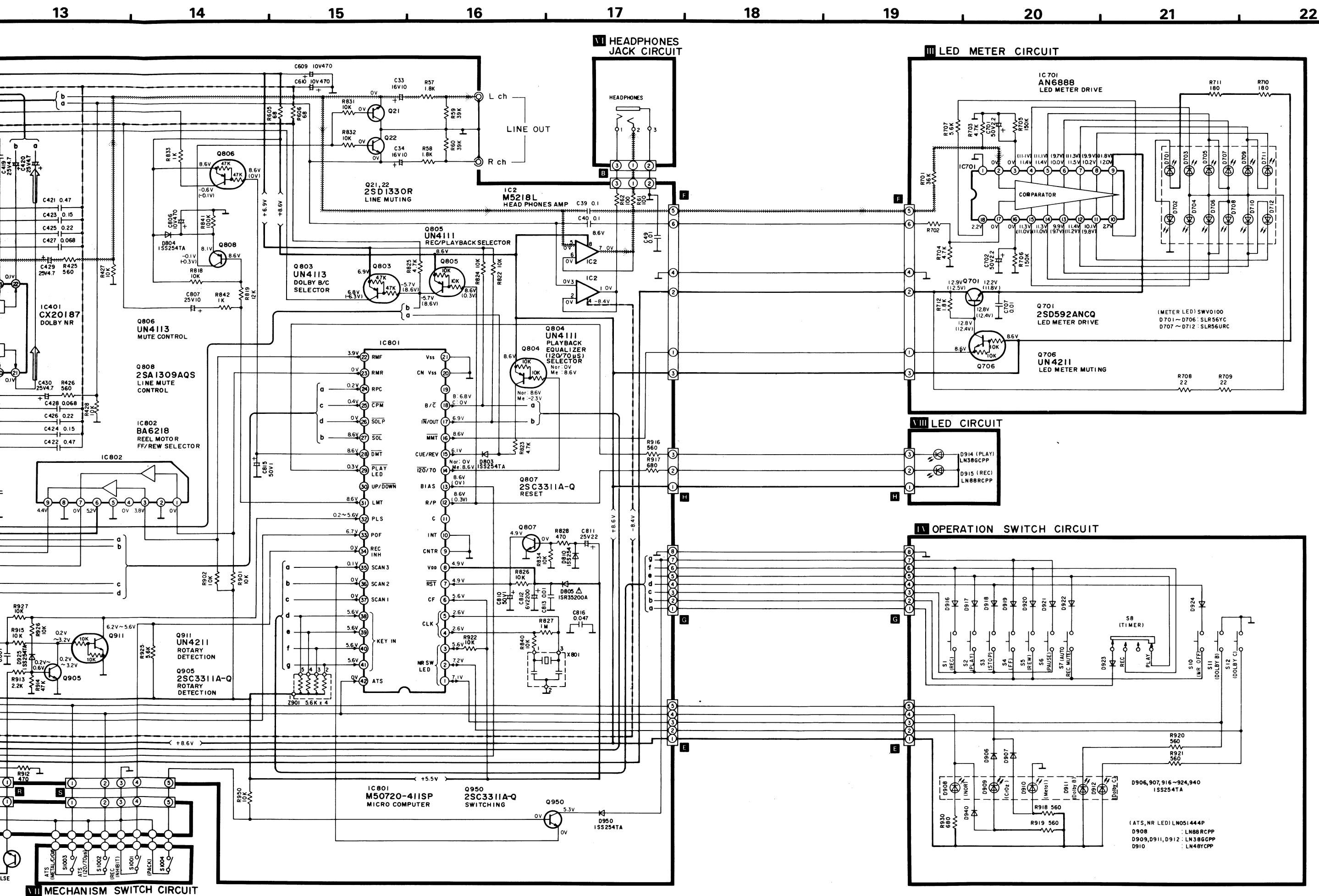
- S1 : Record switch in "off" position.
 - S2 : Playback switch in "off" position.
 - S3 : Stop switch in "off" position.
 - S4 : F.F. switch in "off" position.
 - S5 : Rew. switch in "off" position.
 - S6 : Pause switch in "off" position.
 - S7 : Auto rec. mute switch in "off" position.
 - S8 : Timer stand-by switch in "off" position.
 - S10 : NR off switch in "off" position.
 - S11 : Dolby B NR switch in "off" position.
 - S12 : Dolby C NR switch in "off" position.
 - S601 : Power switch in "on" position.
 - S602 : Voltage selector in "240V" position.
(XA, XB) areas
 - S1001 : Rec. inhibit switch in "off" position.
 - S1002 : ATS (120/70 μ s) in "off (70 μ s)" position.
 - S1003 : ATS (Metal/CrO₂) in "off (Metal)" position.
 - S1004 : Pack switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)
- Capacity are in micro-farads (μ F) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
- () Voltage values at record mode.
For measurement us EVM.
- Important safety notice**
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (—+B—) indicates +B (bias).
 - (—B—) indicates -B (bias).
 - (---) indicates the flow of the playback signal.
 - (---) indicates the flow of the record signal.

* Caution !

- IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
- * Cover the parts boxes made of plastics with aluminum foil.
 - * Ground the soldering iron.
 - * Put a conductive mat on the work table.
 - * Do not touch the legs of IC or LSI with the fingers directly.







RESISTORS & CAPACITORS

TERMINAL

Notes : * Important safety notice :
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1K Ω)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470 Ω)

Numbering System of Capacitor

Example:

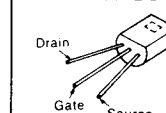
ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001 μ F)	Tolerance	Peculiarity
ECEA	50	M	330	
Type	Voltage (50V)	Peculiarity	Value (33 μ F)	

- Capacity are in microfarads (μ F) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).
- Resistance are in ohms (Ω), unless specified otherwise, 1K = 1,000 Ω , 1M = 1,000k Ω

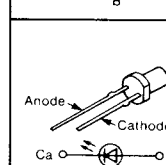
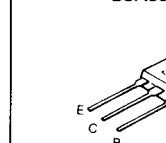
Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W 12 : 1/2W	J : $\pm$ 5%
ERG : Metal Oxide	14 : 1/4W 25 : 1/4W	F : $\pm$ 1%
ERQ : Fuse Type Metal	1A : 1W 18 : 1/8W	G : $\pm$ 2%
ERX : Metal Film	S2 : 1/4W S1 : 1/2W	J : $\pm$ 5%
ERD L : Carbon (chip)	2F : 1/4W 50 : 1/2W	K : $\pm$ 10%
ERO K : Metal Film (chip)	2A : 2W 3A : 3W	M : $\pm$ 20%
ERC : Solid	6G : 1/10W 8G : 1/8W	
ERF : Incombustible Box-Shaped		
ERM : Wire-Wound		
RRJ : Chip Resistor		
ERJ : Chip Resistor		

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V 1A : 10V	K : $\pm$ 10%
ECCD : Ceramic	1C : 16V 1E : 25V	M : $\pm$ 20%
ECKD : Ceramic Capacitor	1H : 50V 1V : 35V	Z : +80 % -20
ECQM : Polyester	50 : 50V 05 : 50V	
ECQP : Polypropylene	2H : 500V 2A : 100V	J : $\pm$ 5%
ECG : Ceramic	1 : 100V 1J : 63V	G : $\pm$ 2%
ECEA N : Non Polar Electrolytic	KC : 400V AC	F : $\pm$ 1%
QCU : Ceramic (Chip Type)	KC : 125V AC	C : $\pm$ 0.25pF
ECUX : Ceramic (Chip Type)	(UL)	D : $\pm$ 0.5pF
ECF : Semiconductor		
EECW : Liquid electrolyte double layer capacitor		

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
R708	ERDS2T J220	22 1/4	R925	ERDS2T J562	5.6K 1/4	C309	ECKD1H472KB	0.0047 50
R709	ERDS2T J220	22 1/4	R926	ERDS2T J103	10K 1/4	C310	ECKD1H103PF	0.01 50
R710	ERDS2T J181	180 1/4	R927	ERDS2T J103	10K 1/4	C311	ECKD1H473ZF	0.047 50
R711	ERDS2T J181	180 1/4	R930	ERDS2T J681	680 1/4	C312	ECKD1H103PF	0.01 50
R712	ERDS2T J182	1.8K 1/4	R950	ERDS2T J103	10K 1/4	C401	ECEA1HK010	1 50
R810	ERDS2T J272	2.7K 1/4	CAPACITORS(VALUE,VOLTAGE)			C402	ECEA1HK010	1 50
R811	ERDS2T J332	3.3K 1/4	C1	ECEA1EK4R7	4.7 25	C403	ECKD1H122KB	0.0012 50
R812	ERDS2T J103	10K 1/4	C2	ECEA1EK4R7	4.7 25	C404	ECKD1H122KB	0.0012 50
R813	ERDS2T J103	10K 1/4	C3	ECKD1H681K	680P 50	C405	ECKD1H152KB	0.0015 50
R814	ERDS2T J103	10K 1/4	C4	ECKD1H681K	680P 50	C406	ECKD1H152KB	0.0015 50
R815	ERDS2T J563	56K 1/4	C5	ECKD1H103PF	0.01 50	C407	ECEA1EK4R7	4.7 25
R816	ERDS2T J151	150 1/4	C6	ECKD1H103PF	0.01 50	C408	ECEA1EK4R7	4.7 25
R817	ERDS2T J391	390 1/4	C7	ECEA0JU221	220 6.3	C409	ECQB1H472JZ	0.0047 50
R818	ERDS2T J103	10K 1/4	C8	ECEA0JU221	220 6.3	C410	ECQB1H472JZ	0.0047 50
R819	ERDS2T J123	12K 1/4	C9	ECQB1H562JZ	0.0066 50	C411	ECQB1H153JZ	0.015 50
R820	ERDS2T J472	4.7K 1/4	C10	ECQB1H562JZ	0.0066 50	C412	ECQB1H153JZ	0.015 50
R821	ERDS2T J472	4.7K 1/4	C11	ECEA1CKS100	10 16	C413	ECQM1H473JZ	0.047 50
R822	ERDS2T J103	10K 1/4	C12	ECEA1CKS100	10 16	C414	ECQM1H473JZ	0.047 50
R823	ERDS2T J472	4.7K 1/4	C13	ECKD1H102KB	0.001 50	C415	ECQB1H682JZ	0.0068 50
R824	ERDS2T J103	10K 1/4	C14	ECKD1H102KB	0.001 50	C416	ECQB1H682JZ	0.0068 50
R825	ERDS2T J472	4.7K 1/4	C15	ECEA1HK010	1 50	C417	ECQB1H103JZ	0.01 50
R826	ERDS2T J103	10K 1/4	C16	ECEA1HK010	1 50	C418	ECQB1H103JZ	0.01 50
R827	ERDS2T J105	1M 1/4	C17	ECKD2H121KB	120P 500	C419	ECEA1EK4R7	4.7 25
R828	ERDS2T J471	470 1/4	C18	ECKD2H121KB	120P 500	C420	ECEA1EK4R7	4.7 25
R830	ERDS2T J472	4.7K 1/4	C19	ECKD1H122KB	0.0012 50	C421	ECQM1H474JZ	0.47 50
R831	ERDS2T J103	10K 1/4	C20	ECKD1H122KB	0.0012 50	C422	ECQM1H474JZ	0.47 50
R832	ERDS2T J103	10K 1/4	C21	ECEA1EK4R7	4.7 25	C423	ECQM1H154JZ	0.15 50
R833	ERDS2T J102	1K 1/4	C22	ECEA1EK4R7	4.7 25	C424	ECQM1H154JZ	0.15 50
R834	ERDS2T J103	10K 1/4	C23	ECKD1H122KB	0.0012 50	C425	ECQM1H224JZ	0.22 50
R835	ERDS2T J472	4.7K 1/4	C24	ECKD1H122KB	0.0012 50	C426	ECQM1H224JZ	0.22 50
R840	ERDS2T J103	10K 1/4	C25	ECBA1H681KB5	680P 50	C427	ECQM1H683JZ	0.068 50
R841	ERDS2T J104	100K 1/4	C26	ECBA1H681KB5	680P 50	C428	ECQM1H683JZ	0.068 50
R842	ERDS2T J102	1K 1/4	C27	ECQB1H223JZ	0.022 50	C429	ECEA1EK4R7	4.7 25
R851	ERDS2T J182	1.8K 1/4	C28	ECQB1H223JZ	0.022 50	C430	ECEA1EK4R7	4.7 25
R852	ERDS2T J182	1.8K 1/4	C29	ECQB1H822JZ	0.0082 50	C431	ECEA1CKS100	10 16
R901	ERDS2T J103	10K 1/4	C30	ECQB1H822JZ	0.0082 50	C441	ECKD1H681KB	680P 50
R902	ERDS2T J103	10K 1/4	C31	ECQB1H332JZ	0.0033 50	C442	ECKD1H681KB	680P 50
R903	ERG1ANJ390	39 1	C32	ECQB1H332JZ	0.0033 50	C501	Δ ECKDKC103PF2	0.01 125
R904	ERDS2T J391	390 1/4	C33	ECEA1CKS100	10 16	C502	ECEA1CU472	4700 16
R905	ERDS2T J152	1.5K 1/4	C34	ECEA1CKS100	10 16	C503	ECEA1CU222	2200 16
R906	ERG2ANJ390	39 2	C35	ECEA1HK010	1 50	C504	ECKD1H103PF	0.01 50
(E, EH, EG, XA)			C36	ECEA1HK010	1 50	C505	ECKD1H103PF	0.01 50
(XB)			C39	ECQV1H104JZ	0.1 50	C506	ECEA1CU221	220 16
(EK, XL)			C40	ECQV1H104JZ	0.1 50	C507	ECEA1CU471	470 16
ERG3ANJ390	39 3		C43	ECKD1H103PF	0.01 50	C508	ECKD1H103PF	0.01 50
ERDS2T J152	1.5K 1/4		C44	ECEA1HCR33	0.33 50	C509	ECEA1AU471	470 10
ERDS2T J104	100K 1/4		C45	ECQB1H152JZ	0.0015 50	C510	ECEA1AU471	470 10
ERDS2T J273	27K 1/4		C46	ECQB1H152JZ	0.0015 50	C511	ECKD2H682PEL	0.0068 500
ERDS2T J273	27K 1/4		C47	ECQB1H153JZ	0.015 50	C512	ECKD1H473ZF	0.047 50
ERDS2T J102	1K 1/4		C48	ECQB1H153JZ	0.015 50	C701	ECEA1HK2R2B	2.2 50
ERDS2T J471	470 1/4		C49	ECKD1H103PF	0.01 50	C702	ECEA1HK2R2B	2.2 50
ERDS2T J222	2.2K 1/4		C51	ECEA1HN010S	1 50	C707	ECKD1H103PF	0.01 50
ERDS2T J473	47K 1/4		C301	ECKD1H101KB	100P 50	C806	ECEA1AU471	470 10
ERDS2T J103	10K 1/4		C302	ECKD1H101KB	100P 50	C807	ECEA1EK100	10 25
ERDS2T J561	560 1/4		C303	ECQP1183JZ	0.018 100	C810	ECEA1HK010	1 50
ERDS2T J681	680 1/4		C304	ECEA1EK4R7	4.7 25	C811	ECEA1EU220	22 25
ERDS2T J561	560 1/4		C305	ECEA1EK4R7	4.7 25	C812	ECEA0JU222	2200 6.3
ERDS2T J561	560 1/4		C306	ECKD1H562KB	0.0056 50	C813	ECKD1H103PF	0.01 50
ERDS2T J561	560 1/4		C307	ECKD1H472KB	0.0047 50	C814	ECKD1H103PF	0.01 50
ERDS2T J103	10K 1/4		C308	ECKD1H472KB	0.0047 50	C815	ECEA1HK010	1 50
						C816	ECKD1H473ZF	0.047 50
						C901	ECEA1CN100S	10 16
						C902	ECBT1H102KB5	0.001 50

2SJ40CD
2SK381BC

2SA885Q



■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

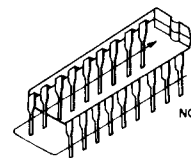
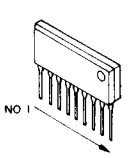
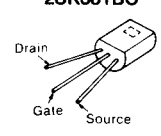
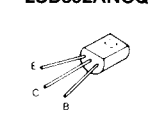
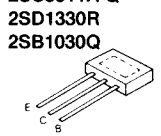
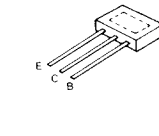
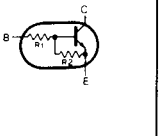
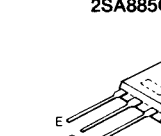
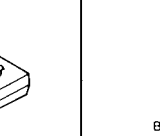
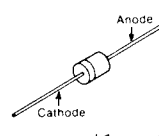
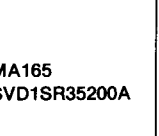
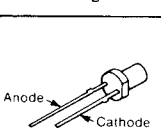
components use only

Tolerance
J: $\pm 5\%$
F: $\pm 1\%$
G: $\pm 2\%$
J: $\pm 5\%$
K: $\pm 10\%$
M: $\pm 20\%$

Tolerance
K: $\pm 10\%$
M: $\pm 20\%$
Z: $+80\%$ -20%
J: $\pm 5\%$
G: $\pm 2\%$
F: $\pm 1\%$
C: $\pm 0.25\text{pF}$
D: $\pm 0.5\text{pF}$

Value.
680K 1/4
6.8K 1/4
6.8K 1/4
6.8K 1/4
3.3K 1/4
3.3K 1/4
3.9K 1/4
3.9K 1/4
430 1/4
430 1/4
2.4K 1/4
2.4K 1/4
6.8K 1/4
6.8K 1/4
680 1/4
680 1/4
560 1/4
560 1/4
10K 1/4
10K 1/4
820 1/4
1.8K 1/4
330 1/4
1K 1/4
68 1/4
68 1/4
56 1/4
56 1/4
0.15 1
0.15 1
36K 1/4
36K 1/4
4.7K 1/4
4.7K 1/4
150K 1/4
150K 1/4
5.6K 1/4

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
R708	ERDS2TJ220	22 1/4	R925	ERDS2TJ562	5.6K 1/4	C309	ECKD1H472KB	0.0047 50
R709	ERDS2TJ220	22 1/4	R926	ERDS2TJ103	10K 1/4	C310	ECKD1H103PF	0.01 50
R710	ERDS2TJ181	180 1/4	R927	ERDS2TJ103	10K 1/4	C311	ECKD1H473ZF	0.047 50
R711	ERDS2TJ181	180 1/4	R930	ERDS2TJ681	680 1/4	C312	ECKD1H103PF	0.01 50
R712	ERDS2TJ182	1.8K 1/4	R950	ERDS2TJ103	10K 1/4	C401	ECEA1HK010	1 50
R810	ERDS2TJ272	2.7K 1/4	CAPACITORS(VALUE,VOLTAGE)			C402	ECEA1HK010	1 50
R811	ERDS2TJ332	3.3K 1/4	C1	ECEA1EK4R7	4.7 25	C403	ECKD1H122KB	0.0012 50
R812	ERDS2TJ103	10K 1/4	C2	ECEA1EK4R7	4.7 25	C404	ECKD1H122KB	0.0012 50
R813	ERDS2TJ103	10K 1/4	C3	ECKD1H681K	680P 50	C405	ECKD1H152KB	0.0015 50
R814	ERDS2TJ103	10K 1/4	C4	ECKD1H681K	680P 50	C406	ECKD1H152KB	0.0015 50
R815	ERDS2TJ563	56K 1/4	C5	ECKD1H103PF	0.01 50	C407	ECEA1EK4R7	4.7 25
R816	ERDS2TJ151	150 1/4	C6	ECKD1H103PF	0.01 50	C408	ECEA1EK4R7	4.7 25
R817	ERDS2TJ391	390 1/4	C7	ECEA0JU221	220 6.3	C409	ECQB1H472JZ	0.0047 50
R818	ERDS2TJ103	10K 1/4	C8	ECEA0JU221	220 6.3	C410	ECQB1H472JZ	0.0047 50
R819	ERDS2TJ123	12K 1/4	C9	ECQB1H562JZ	0.0056 50	C411	ECQB1H153JZ	0.015 50
R820	ERDS2TJ472	4.7K 1/4	C10	ECQB1H562JZ	0.0056 50	C412	ECQB1H153JZ	0.015 50
R821	ERDS2TJ472	4.7K 1/4	C11	ECEA1CKS100	10 16	C413	ECQM1H473JZ	0.047 50
R822	ERDS2TJ103	10K 1/4	C12	ECEA1CKS100	10 16	C414	ECQM1H473JZ	0.047 50
R823	ERDS2TJ472	4.7K 1/4	C13	ECKD1H102KB	0.001 50	C415	ECQB1H682JZ	0.0068 50
R824	ERDS2TJ103	10K 1/4	C14	ECKD1H102KB	0.001 50	C416	ECQB1H682JZ	0.0068 50
R825	ERDS2TJ472	4.7K 1/4	C15	ECEA1HK010	1 50	C417	ECQB1H103JZ	0.01 50
R826	ERDS2TJ103	10K 1/4	C16	ECEA1HK010	1 50	C418	ECQB1H103JZ	0.01 50
R827	ERDS2TJ105	1M 1/4	C17	ECKD2H121KB	120P 500	C419	ECEA1EK4R7	4.7 25
R828	ERDS2TJ471	470 1/4	C18	ECKD2H121KB	120P 500	C420	ECEA1EK4R7	4.7 25
R830	ERDS2TJ472	4.7K 1/4	C19	ECKD1H122KB	0.0012 50	C421	ECQM1H474JZ	0.47 50
R831	ERDS2TJ103	10K 1/4	C20	ECKD1H122KB	0.0012 50	C422	ECQM1H474JZ	0.47 50
R832	ERDS2TJ103	10K 1/4	C21	ECEA1EK4R7	4.7 25	C423	ECQM1H154JZ	0.15 50
R833	ERDS2TJ102	1K 1/4	C22	ECEA1EK4R7	4.7 25	C424	ECQM1H154JZ	0.15 50
R834	ERDS2TJ103	10K 1/4	C23	ECKD1H122KB	0.0012 50	C425	ECQM1H224JZ	0.22 50
R835	ERDS2TJ472	4.7K 1/4	C24	ECKD1H122KB	0.0012 50	C426	ECQM1H224JZ	0.22 50
R840	ERDS2TJ103	10K 1/4	C25	ECBA1H681KB5	680P 50	C427	ECQM1H683JZ	0.068 50
R841	ERDS2TJ104	100K 1/4	C26	ECBA1H681KB5	680P 50	C428	ECQM1H683JZ	0.068 50
R842	ERDS2TJ102	1K 1/4	C27	ECQB1H223JZ	0.022 50	C429	ECEA1EK4R7	4.7 25
R851	ERDS2TJ182	1.8K 1/4	C28	ECQB1H223JZ	0.022 50	C430	ECEA1EK4R7	4.7 25
R852	ERDS2TJ182	1.8K 1/4	C29	ECQB1H223JZ	0.022 50	C431	ECEA1CKS100	10 16
R901	ERDS2TJ103	10K 1/4	C30	ECQB1H822JZ	0.0082 50	C441	ECKD1H681KB	680P 50
R902	ERDS2TJ103	10K 1/4	C31	ECQB1H822JZ	0.0082 50	C442	ECKD1H681KB	680P 50
R903	ERG1ANJ390	39 1	C32	ECQB1H332JZ	0.0033 50	C601	ECKDKC103PF2	0.01 125
R904	ERDS2TJ391	390 1/4	C33	ECQB1H332JZ	0.0033 50	C602	ECEA1CU472	4700 16
R905	ERDS2TJ152	1.5K 1/4	C34	ECEA1CKS100	10 16	C603	ECEA1CU222	2200 16
R906	ERG2ANJ390	39 2	C35	ECEA1CKS100	10 16	C604	ECKD1H103PF	0.01 50
[E, EH, EQ, XA]			C36	ECEA1HK010	1 50	C605	ECKD1H103PF	0.01 50
[XB]			C37	ECEA1HK010	1 50	C606	ECEA1CU221	220 16
R906	ERG3ANJ390	39 3	C38	ECQV1H104JZ	0.1 50	C607	ECEA1CU471	470 16
[EK, XL]			C39	ECQV1H104JZ	0.1 50	C608	ECKD1H103PF	0.01 50
R907	ERDS2TJ152	1.5K 1/4	C40	ECKD1H103PF	0.01 50	C609	ECEA1AU471	470 10
R908	ERDS2TJ104	100K 1/4	C41	ECEA1HCR33	0.33 50	C610	ECEA1AU471	470 10
R909	ERDS2TJ273	27K 1/4	C42	ECQB1H152JZ	0.0015 50	C611	ECKD2H682PEL	0.0068 500
R910	ERDS2TJ273	27K 1/4	C43	ECQB1H152JZ	0.0015 50	C612	ECKD1H473ZF	0.047 50
R911	ERDS2TJ102	1K 1/4	C44	ECQB1H153JZ	0.015 50	C701	ECEA1HK2R2B	2.2 50
R912	ERDS2TJ471	470 1/4	C45	ECQB1H153JZ	0.015 50	C702	ECEA1HK2R2B	2.2 50
R913	ERDS2TJ222	2.2K 1/4	C46	ECKD1H103PF	0.01 50	C707	ECKD1H103PF	0.01 50
R914	ERDS2TJ473	47K 1/4	C47	ECEA1HN010S	1 50	C806	ECEA1AU471	470 10
R915	ERDS2TJ103	10K 1/4	C501	ECKD1H101KB	100P 50	C807	ECEA1EK100	10 25
R916	ERDS2TJ561	560 1/4	C302	ECKD1H101KB	100P 50	C810	ECEA1HK010	1 50
R917	ERDS2TJ681	680 1/4	C303	ECQP1183JZ	0.018 100	C811	ECEA1EU220	22 25
R918	ERDS2TJ561	560 1/4	C304	ECEA1EK4R7	4.7 25	C812	ECEA0JU222	2200 6.3
R919	ERDS2TJ561	560 1/4	C305	ECEA1EK4R7	4.7 25	C813	ECKD1H103PF	0.01 50
R920	ERDS2TJ561	560 1/4	C306	ECKD1H562KB	0.0056 50	C814	ECKD1H103PF	0.01 50
R921	ERDS2TJ561	560 1/4	C307	ECKD1H472KB	0.0047 50	C815	ECEA1HK010	1 50
R922	ERDS2TJ103	10K 1/4	C308	ECKD1H472KB	0.0047 50	C816	ECKD1H473ZF	0.047 50
						C901	ECEA1CN100S	10 16
						C902	ECBT1H102KB5	0.001 50

 <table border="1"> <tr><td>AN7016NK</td><td>30 Pin</td></tr> <tr><td>CX20187</td><td>42 Pin</td></tr> <tr><td>AN6888</td><td>18 Pin</td></tr> <tr><td>M50720-411SP</td><td>42 Pin</td></tr> </table>		AN7016NK	30 Pin	CX20187	42 Pin	AN6888	18 Pin	M50720-411SP	42 Pin	 <table border="1"> <tr><td>M5218L</td><td>8 Pin</td></tr> <tr><td>BA6218</td><td>9 Pin</td></tr> </table>		M5218L	8 Pin	BA6218	9 Pin
AN7016NK	30 Pin														
CX20187	42 Pin														
AN6888	18 Pin														
M50720-411SP	42 Pin														
M5218L	8 Pin														
BA6218	9 Pin														
2SJ40CD 2SK381BC 	2SB621A-R 2SD592ANCQ 	2SA1309AQS 2SC3311A-Q 2SD1330R 2SB1030Q 	UN4211 	UN4113, UN4114, UN4111 											
2SA885Q 	2SD12650-P 2SB941-P 	MA165 SVD1SR35200A 	MA4100L MA4062-M MA4082-M MA4056-M 												
LN38GCPP(GREEN) LN48YCPP(YEL) LN88RCPP(RED) SLR56YC(YELLOW) SLR56URC(RED) 															

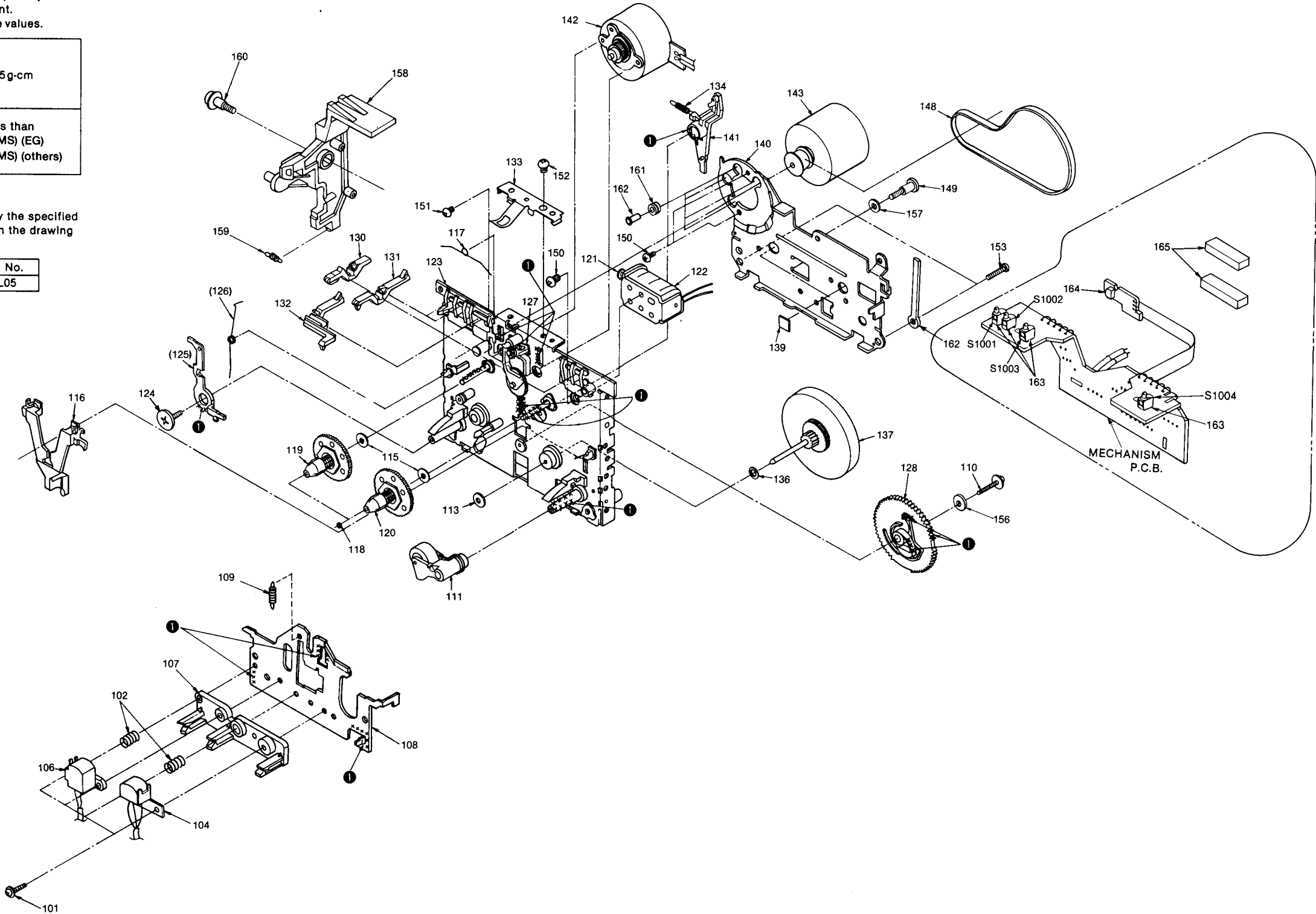
MECHANICAL PARTS LOCATION

SPECIFICATIONS
NOTE: The value indicated by the torque tape may fluctuate during torque measurement.
In that case, obtain the middle of the values.

Takeup tension * Use cassette torque meter.....QZZSRKCT	45±15g-cm
Wow and flutter * Use test tape QZZCWAT	Less than 0.07% (WRMS) (EG) 0.08% (WRMS) (others)

NOTES:
• When changing mechanism parts, apply the specified grease to the are marked "x x" shown in the drawing "Mechanical Parts Location".

Ref. No.	Part Name	Part No.
①	MOLYKOTE	RZZ0L05

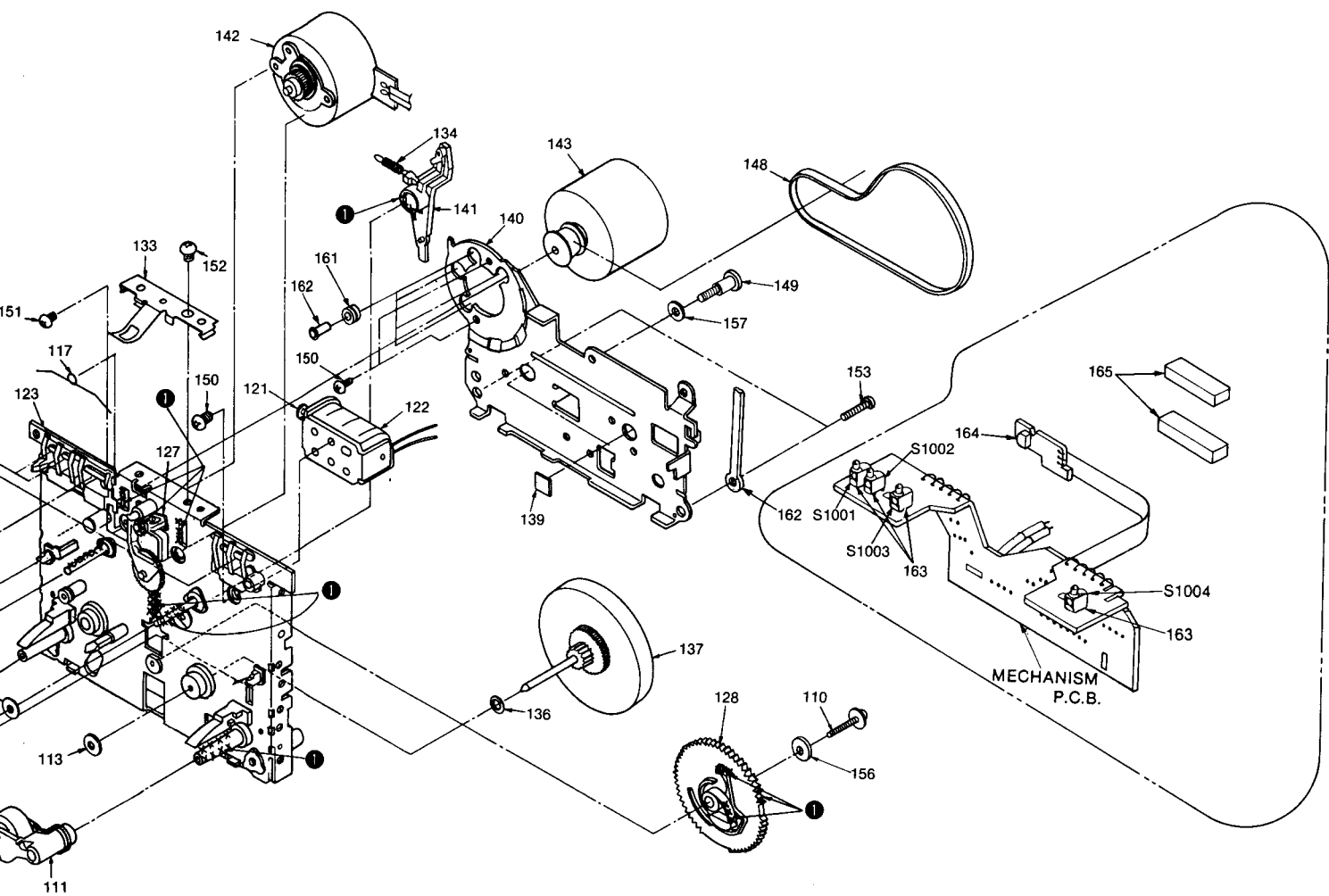


159	160	158	151	152	150	142	162	150	161	141	143	157	148	149	162	156	153	163	164	165	163
124	125	126	132	130	131	123	133	127	121	122	134	140	139	136	137	128					
101	106	116	102	107	104	109	119	118	120	115	108	111	113	117							110

REPLACE

Ref. No.	Part No.
CASSETTE DECK	
101	XSN2+8
102	SMQA1001
104	SJH99
106	SJH100
107	SMQA1002
108	SMQA1256
109	SMQA1004
110	SMQA1230
111	SMQA1231
113	SMQA1007
115	SMQA1014
116	SMQA1056
117	SMQA1024
118	SMQA1010
119	SMQA1013
120	SMQA1026
121	SMQA1212
122	SMQA1233
123	SMQA1257
124	SMQA1235
125	SMQA1011
126	SMQA1012
127	SMQA1061
128	SMQA1258
130	SMQA1282
131	SMQA1259

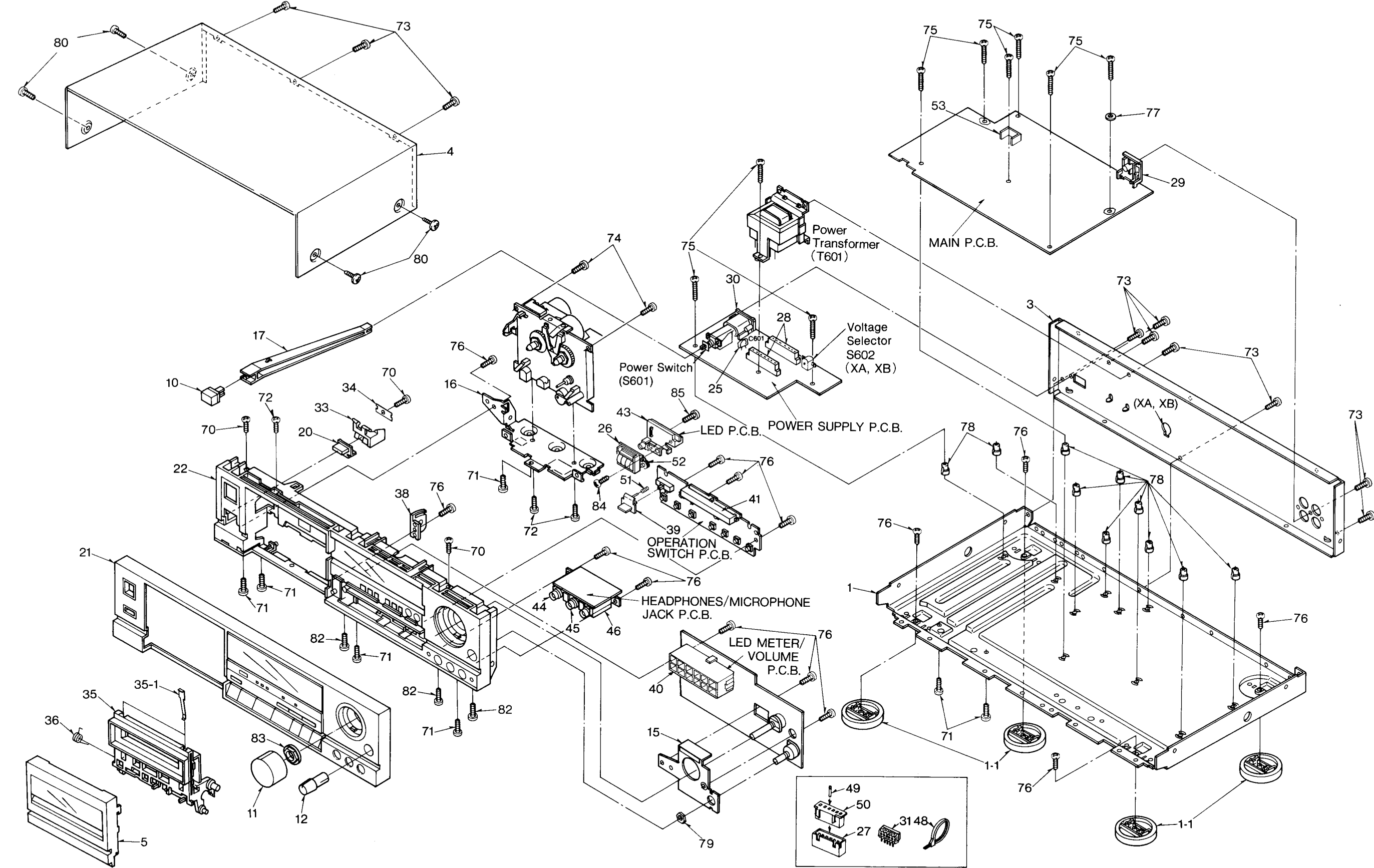
REPLACEMENT PARTS LIST



1	152	150	142	162	150	161	141	143	157	148	149	162	156	153	163	164	165	163
123	133	127	121	122	134	140	139	136	137	128								
08	111	113	117						110									

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CASSETTE DECK					
101	XSN2*8	SCREW	132	SMQA1237	METAL LEVER
102	SMQA1001	SPRING	133	SMQA1062	PLATE
104	SJH99	MAGNETIC HEAD, R/P	134	SMQA1260	SPRING
106	SJH100	MAGNETIC HEAD, ERASE	136	SMQA1031	WASHER
107	SMQA1002	SPACER	137	SMQA1032	WHEEL
108	SMQA1256	HEAD BASE	139	SMQA1097	SPACER
109	SMQA1004	SPRING	140	SMQA1240	BRACKET
110	SMQA1230	SCREW	141	SMQA1241	ARM
111	SMQA1231	PINCH ROLLER	142	SMQA1242	MOTOR (REEL)
113	SMQA1007	WASHER	143	SMQA1261	MOTOR(MAIN)
115	SMQA1014	WASHER	148	SMQA1038	FLAT BELT
116	SMQA1056	HOLD LEVER	149	SMQA1247	SCREW
117	SMQA1024	SPRING	150	SMQA1262	SCREW
118	SMQA1010	WASHER	151	XYN26+C6	SCREW
119	SMQA1013	REEL	152	SMQA1263	SCREW
120	SMQA1026	REEL	153	XTN26*8C	SCREW
121	SMQA1212	PLUNGER CAP	156	SMQA1254	WASHER
122	SMQA1233	PLUNGER COIL	157	SMQA1255	WASHER
123	SMQA1257	CHASSIS ASS'Y	158	SMQA1267	EJECT ARM
124	SMQA1235	SCREW	159	SMQA1019	SPRING
125	SMQA1011	ARM	160	SMQA1222	SCREW
126	SMQA1012	SPRING	162	SMQA1071	TERMINAL
127	SMQA1061	IDLER PULLEY	163	SMQA1252	SW
128	SMQA1258	CAM GEAR	164	SMQA1041	PH. INTERRUPTER
130	SMQA1282	LEVER	165	SJT30443-V	CONNECTOR(4P)
131	SMQA1259	LEVER	165	SJT30740LX-V	CONNECTOR(7P)

CABINET PARTS LOCATION



21	5	10	22	11	17	12	20	4	16	15	25	1	24	1-1	23	24	3	1-1																						
36	35	35-1		33	34	38		44	45	46	26	47	51	43	39	52	30	41	52	28	49	50	27	31	48	53	29													
80			70	72	83	71	72	82	82	71	70	82	73	71	80	x2	70	76	71	82	70	72	74	84	75	76	79	85	76	76	75	71	78	75	73	77	78	73	76	73

REPLACEMENT PARTS

Notes : * Important safety
Components id
manufacturer's
* Bracketed indic
Parts without th
* "K" mark parts
* "S" mark parts
Parts other than

Ref. No.	Part No.
CABINET AND CHASSIS	
1	SKUSB605
1-1	SKL313
3	SGP7160-1
(XA, XB)	
3	SGP7160S
(E)	
3	SGP7160T
(EH, EG)	
3	SGP7160U
(EK)	
3	SGP7160V
(XL)	
4	SKC2110K9
4	SKC2110S9
5	SGE1901-6
5	SGE1901-7
10	SBC666-5
10	SBC666
11	SYTM10ZCO
11	SYTM10ZSO
12	SBDM10ZKO
12	SBDM10MAQ
15	SUWSB608P
16	SUW3083
17	SUB268
20	SBC736-1
20	SBC736
21	SGWSB355
21	SGWSB355
22	SGXSB355
22	SGXSB355
25	SMX897
26	SJN31
27	SJT3213
27	SJT3319
28	SJS501
29	SJF3057N
30	SJSD16
(XL)	
30	SJS9236
(E, EG, EH, EK)	

Ref. No.	Part No.
PACKING MATERIAL	
P1	SPG6217
P1	SPG6218
P2	SPS5037-1
P3	SPS5038-1
P4	XZB50X65B
ACCESSORIES	
A1	SQF13182
(XB)	
A1	SQF13183
(XL)	
A1	SQF13184
(EG)	
A1	SQF13185

REPLACEMENT PARTS LIST

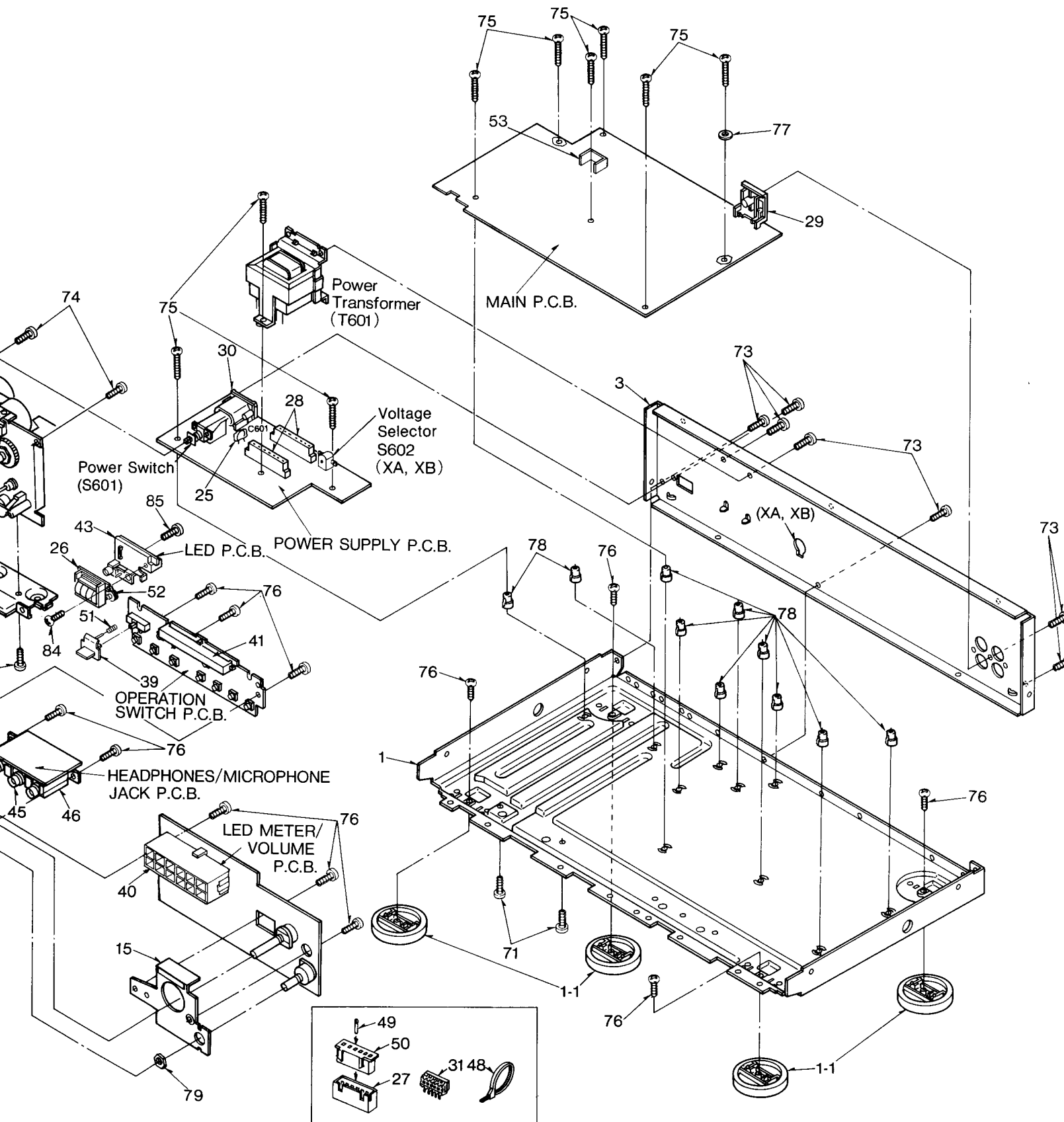
Notes : * Important safety notice :

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

* "(K)" mark parts are used for black type only.

* "(S)" mark parts are used for silver type only.

Parts other than "(K)" and "(S)" marked are used for all color types.



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CABINET AND CHASSIS			(XA)		
1	SKUSB605-KE	BOTTOM BOARD ASS'Y	31	SJT30340LX-V	CONNECTOR(3P)
1-1	SKL313	FOOT	31	SJT30543-V	CONNECTOR(5P)
3	SGP7160-11	REAR PANEL	31	SJT30643-V	CONNECTOR(6P)
(XA, XB)			31	SJT30843-V	CONNECTOR(8P)
3	SGP7160S	REAR PANEL	33	SUB236-2	EJECT LEVER
(E)			34	SUN3090	BRACKET
3	SGP7160T	REAR PANEL	35	SGXSB605PKAN	CASSETTE HOLDER ASS'Y
(EH, EG)			35-1	QBP2006A	SPRING
3	SGP7160U	REAR PANEL	36	SUS869	LEAF SPRING
(EK)			38	SKJSB405-KE	GEAR
3	SGP7160V	REAR PANEL	39	SBD145	KNOB
(XL)			39	SBD145-1	KNOB
4	(K) SKC2110K99	CABINET BODY	40	SWV0100	LED BLOCK ASS'Y
4	(S) SKC2110S98	CABINET BODY	41	LN051444P	LED BLOCK ASS'Y
5	(K) SGE1901-6	CASSETTE LID	43	SMQ40037	BRACKET
5	(S) SGE1901-7	CASSETTE LID	44	SJJ126B	JACK(HEADPHONES)
10	(K) SBC666-5	BUTTON, POWER	45	SJJ127H-H	JACK
10	(S) SBC666	BUTTON, POWER	46	SUN3092	BRACKET
11	(K) SYTM10ZCOA	KNOB	47	SWV0100	LED BLOCK ASS'Y
11	(S) SYTM10ZSOA	KNOB	48	SHR301	CLAMPER
12	(K) SBDM10ZKOA	KNOB	49	SJT783	CONTACT
12	(S) SBDM10MAOA	KNOB	50	SJS5215	SOCKET(2P)
15	SUNSB608R-KE	BRACKET ASS'Y	50	SJS5331	SOCKET(3P)
16	SUN3093	BRACKET	51	SUS884	LEAF SPRING
17	SUB268	ROD	52	SMQ20027	BELT
20	(K) SBC736-1	BUTTON	53	SMY954	HEAT SINK
20	(S) SBC736	BUTTON	82	XTS3+8JFZ	SCREW
21	(K) SGWSB355-KE	SUB PANEL	83	SNE4021	NUT
21	(S) SGWSB355-SE	SUB PANEL	SCREWS, WASHERS AND NUTS		
22	(K) SGXSB355-KE	FRONT PANEL	70	XTB3+8J	SCREW
22	(S) SGXSB355-SE	FRONT PANEL	71	XTB3+6JFZ	SCREW
25	SMX897	COVER	72	XTB3+6FFR	SCREW
26	SJN31	TAPE COUNTER	73	XTB3+8JFZ	SCREW
27	SJT3213	CONNECTOR(2P)	74	XTB3+12JFR	SCREW
27	SJT3319	CONNECTOR(3P)	75	XTB3+20J	SCREW
28	SJS501	SOCKET(5P)	76	XTB3+10J	SCREW
29	SJF3057N	TERMINAL BOARD	77	XWA3B	WASHER
30	(Δ) SJS16	AC INLET	78	SHE187-2	HOLDER
(XL)			79	XNS8FZ	NUT
30	(Δ) SJS9236	AC INLET	80	(K) SNE2129-1	SCREW
(E, EG, EH, EK)			80	(S) SNE2129	SCREW

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PACKING MATERIAL			(EK)		
P1	(K) SPG6217	CARTON BOX	A1	SQF13186	INSTRUCTION MANUAL
P1	(S) SPG6218	CARTON BOX	(E, EH, XA)		
P2	SPS5037-1	PAD	A2	SJP2264	CORD
P3	SPS5038-1	PAD	A3	(Δ) SFDAC05G02	POWER CORD
P4	XZB50X65B02	POLY SHEET	(EK)		
ACCESSORIES			A3	(Δ) SJA168	POWER CORD
A1	(XB) SQF13182	INSTRUCTION MANUAL	(XA)		
A1	(XL) SQF13183	INSTRUCTION MANUAL	A3	(Δ) SJA171	POWER CORD
A1	(EG) SQF13184	INSTRUCTION MANUAL	(E, EH, EG)		
A1	SQF13185	INSTRUCTION MANUAL	A3	(Δ) SJA173	POWER CORD
			(XL)		
			A3	(Δ) SJA183	POWER CORD
			(XB)		
			A4	(Δ) RJP120ZBS-H	AC PLUG ADAPTOR
			(XA, XB)		

15	25	1	24	1-1	23	24	3	1-1
45	46	26	47	51	43	39	52	28
49	50	27	31	48	53	29		
74	84	75	76	79	85	76	75	71
76	76	75	71	78	75	73	77	78
73	76	73						